Catalogue of the Cenozoic plants of Bulgaria (Eocene to Pliocene)

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Abstract: All taxa of the Bulgarian Cenozoic macroflora published in the period 1929-2003 are presented. The taxa have been identified as fragments or imprints of plant organs, carpoids and cuticles. Each taxon is presented with its geographical location, and a schematic map of Buglaria features all cited locations. The interval of the stratigraphic distribution and the lithostratigraphic unit of origin of each taxa are given too. A specified number of taxa have been revised. They are designated as *hoc loco*.

Key words: Bulgaria, Cenozoic, fossil macroflora, cuticle, stratigraphical range, geographical locality

Introduction

The Cenozoic system in Bulgaria consists of lithologically different in content and facially specifics rocks. An essential part of them contain fossil plant organs that are the subject of this research (Fig. 1) with the help of different methods, depending on the type of preservation of the remains. Compositionally, they present the geological record of the Bulgarian Cenozoic flora and stand as a rich source of information about the composition, nature and development of that flora within a period of about 45 millions years. In terms of the above said, the presented catalogue summarises all information published during the period 1929–2003 on the Cenozoic (Eocene to Pliocene) macroflora of Bulgaria.

Chronologically, the studies of that flora have generally proceeded in three stages.

The first stage (1929–1940) is related to the study of different local paleofloras with the help only of the classical method, known as ichnophytolological. The works of Nikolai Stojanov, Boris Stefanov, Daki Jordanov, Georgi Konjarov, Georgi Konstantinov and Boris Kitanov relate to that period.

The second stage (1946–1965) is a continuation of the first one in terms of methodology, but mention deserve the more goal-oriented research of certain basins and of sediments with coal-bearing strata. During that period, B. Stefanov, D. Jordanov and B. Kitanov had continued their researches, but new names have emerged, partly featured among the authors of the present catalogue.

The third stage (1965 – until present) is the most productive and is mainly related to the setting up of a specialized Department of Paleobotany and Pollen Analysis at the Institute of Botany at Bulgarian Academy of Sciences (BAS.)

It is particularly this Department that engaged in intensive paleobotanic activity in terms of volume and implementation of new methods. All Cenozoic coal basins have undergone systematic study, besides a large number of other rock complexes of Eocene to Pliocene age. A total number of about 45 lithostratigrafic formations have been studied so far. A large number of fossil plants have been determined in their sediments, probably exceeding more than 1000 species. However, as it is pointed out, the catalogue features only the taxa official-

ly published from 1929 until 2003 and they amount to 860 in number (20 of them determined to the genus).

In terms of systematic paleobotany the Cenozoic macroflora consists of representatives of the following divisions: *Chrysophyta*, *Phaeophyta*, *Charophyta*, *Bryophyta*, *Equisetophyta*, *Lycopodiophyta*, *Polypodiophyta*, *Pinophyta* and *Magnoliophyta*.

As the most general characteristics of the Cenozoic macroflora, the following conclusions can be drawn:

1. In the group of nonvascular plants a stronger presence of the representatives of stonewort algae (*Charophyta* – 10 species) stands out. A moss species was registered too.

2. In the group of higher plants the taxa are distributed quantitatively as follows:

Divisio *Lycopodiophyta*: 1 species
Divisio *Equisetophyta*: 5 species
Divisio *Polypodiophyta*: 23 species
Divisio *Pinophyta*: 72 species
Divisio *Magnoliophyta*: 762 species

3. In the group of ferns the genera are represented by one to three species and no dominant genus.

4. In the group of gymnosperms the genera *Pinus* (24 species), *Juniperus* (6), *Thuja* (3) and *Sequoia* (3) stand out with the greatest number of species.

5. In the group of angiosperms a total of 274 genera have been determined and the highest species diversity has been registered in the following genera: *Quercus* (27 species), *Myrica* (14), *Salix* (14), *Populus* (13), *Potamogeton* (13), *Magnolia* (12), *Acer* (11), and *Stratiotes* (10).

6. The highest genus diversity has been established in the following families: *Fabaceae* (17 genera), *Fagaceae* (11), *Lauraceae* (11), *Cyperaceae* (9), *Theaceae* (6) and *Betulaceae* (6).

The catalogue has the following structure:

- the species are grouped according to the systematic divisions to which they belong;
- within the framework of divisions, the taxa are arranged according to the genera and species, in an alphabetical order;
- for every species a citation block is given that includes the citation of the accepted name, the basionym, the more important synonyms from a nomenclature point of view, and all Bulgarian sources in which it has been described or recorded;
- under the heading "**Material**" the type of the fossil organ is given, on the basis of which the species has been determined: Li = leaf imprints; Ca = carpoid (or diaspores) – in that category fossil megaspores, seeds, fruits, cones (strobiles), and oogonia of stonewort algae have been included; Cu = cuticles (epidermal structure), including phytoleims, as well as dispersed cuticles. In an insignificant number of cases, besides these three basic fossil categories, the type of the fossil part is also given;
- under the heading "**Collection**" the abbreviation IB (BAS) stands for the Institute of Botany, Department of Palaeobotany and Palynology, Bulgarian Academy of Sciences. Whenever the authors have not pointed out in which collection the fossil samples are stored, they are marked as "unknown";
- all species of the Bulgarian Cenozoic flora are listed by the name of their locality; the lithostratigraphic unit of origin of the fossils; and the chronostratigraphic range of the flora-bearing sediments. As that range is not always exactly dated, the most probable interval is given to which the flora-bearing sediments belong. The *Glossary of the Officially Accepted Lithostratigraphic Units in Bulgaria* (1882–1992) (Tenchov 1993) has been used to determine to what lithostratigraphic units these sediments belonged, while the units published after 1992 are referred to the corresponding geological literature of the last decade of the 20th century;
- in a number of cases a revision has been carried out, either on the basis of the original fossil materials, or on photographic illustration of the originals. The results of the revision are featured under the heading "**Rev.**" by the name of the corresponding authors;
- an insignificant part of the taxa have been revised during the final stages of the catalogue compilation and then the name of the author is supplemented with "hoc loco";
- the names of the taxa whose taxonomic status has been changed or taxa erroneously reported for Bulgaria are listed only in "*italic*" and the correct names in "**bold**" and "*italic*";
- the stratigraphic interval "Middle Oligocene" from the earlier literature is given here as "Lower Oligocene" in compliance with the latest division of the Oligocene (Gradstein & al. 2004);
- the generic names of the taxa with disputable systematic position are given in inverted comas.
- the names of Bulgarian locations and lithostratigraphic units in the catalogue are translated into English according to Danchev & al. (1998);
- whenever the figures in the plates in literature are designated with letters from the Cyrilic alphabet, they are transcribed in Latin according to Danchev & al. (op. c.);

➢ the name of all registered species is written in Latin, according to the rules, while in the citation blocks are given according to the literary source.

The presented catalogue is the first attempt for a systematic summary of the fossil macroflora of the Cenozoic period in Bulgaria and, along with its positive aspects, it has undoubtedly some weak spots. The authors will be grateful for any remarks and particular suggestions aimed at the improvement of its structure and content in a probable second edition.

The listing of the authors' team reflects the participation in the compilation of the catalogue.

E. Palamarev

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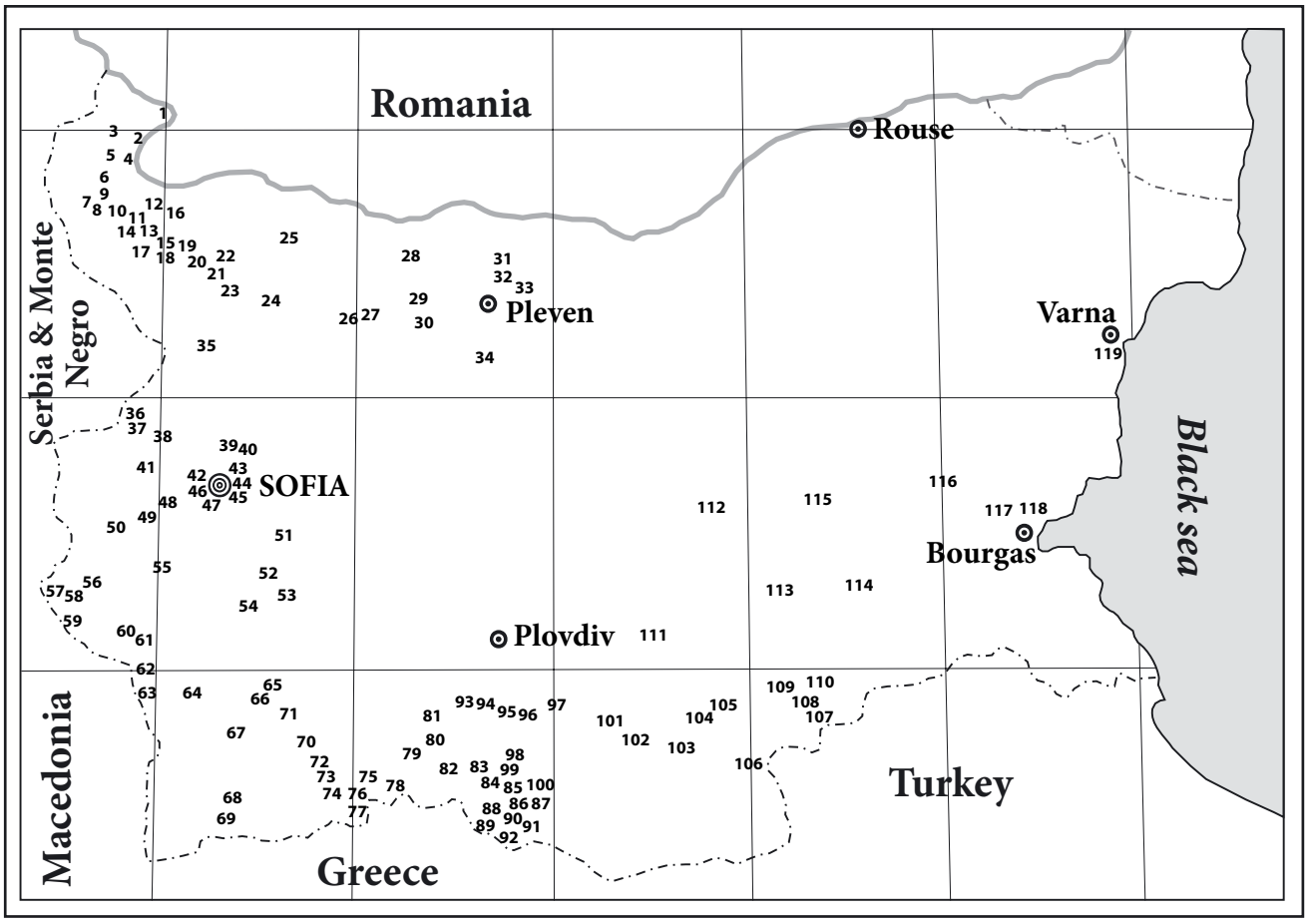

Figure 1. Localities of Cenozoic floras in Bulgaria.

1, Koshava; **2**, Vidin; **3**, Bela Rada; **4**, Sinagovtsi; **5**, Milchina Luka; **6**, Gramada; **7**, Shishmanovo; **8**, Tolovitsa; **9**, Makresh; **10**, Kladoroub–Ostrokaptsi; **11**, Dulgo Pole; **12**, Vodnyantsi; **13**, Karbintsi; **14**, Medovnitsa; **15**, Belo Pole; **16**, Drenovets; **17**, Rouzhintsi; **18**, Cherno Pole; **19**, Smirnenski; **20**, Slavotin; **21**, Stoudeno Bouche; **22**, Gabrovnitsa; **23**, Montana; **24**, Krivodol; **25**, Hairedin; **26**, Gabare; **27**, Lepitsa; **28**, Stavertsi; **29**, Pelovo; **30**, Telish; **31**, Brushlyanitsa; **32**, Koilovtsi; **33**, Slavyanovo; **34**, Kalenik; **35**, Vurshets; **36**, Hrabursko; **37**, Gaber; **38**, Balsha; **39**, Novi Iskur; **40**, Kutina; **41**, Slakovtsi; **42**, Bankya; **43**, Podgoumer; **44**, Operata; **45**, Lozenets; **46**, Zemlyane; **47**, Bistritsa; **48**, Pernik; **49**, Kopanitsa; **50**, Zhedna; **51**, Choukourovo; **52**, Samokov; **53**, Borovets; **54**, Dospei; **55**, Bobov Dol; **56**, Nikolichevtsi; **57**, Boukovska Mahala; **58**, Dolno Selo; **59**, Gyueshevo; **60**, Vaksevo; **61**, Boboshevo; **62**, Logodash; **63**, Gabrovo; **64**, Oranovo–Simitli; **65**, Belitsa; **66**, Razlog; **67**, Brezhani; **68**, Melnik; **69**, Marino Pole; **70**, Boukovo; **71**, Eleshnitsa; **72**, Baldevo; **73**, Ognyanovo; **74**, Gurmen; **75**, Satovcha; **76**, Vulkosel; **77**, Slashten; **78**, Barutin; **79**, Borino–Teshel; **80**, Devin; **81**, Selcha; **82**, Mougla; **83**, Stikul; **84**, Smolyan; **85**, Ravnishta; **86**, Dolno Fatovo; **87**, Polkovnik Serafimovo; **88**, Goudevitsa; **89**, Gozdyuvska Mahala; **90**, Luga; **91**, Palovska Cheshma; **92**, Plovdivtsi; **93**, Orehovo; **94**, Hvoina; **95**, Pavelsko; **96**, Braikovitsa; **97**, Oreshets; **98**, Momchilovci; **99**, Levochevo–Pisanitsa; **100**, Oustovo–Strazha; **101**, Angel Voivoda; **102**, Pchelarovo; **103**, Perperek; **104**, Gorno Voivodino; **105**, Tsareva Polyana; **106**, Vulche Pole; **107**, Raikova Mogila; **108**, Pustrogor; **109**, Georgi Dobrevo; **110**, Levka; **111**, Merichleri; **112**, Nikolaevo; **113**, Troyanovo; **114**, Golyam Manastir; **115**, Hadzhi Dimitur; **116**, Planinitsa; **117**, Bulgarovo; **118**, Roudnik; **119**, Obrochishte.

Kingdom VEGETABILIA

I. Divisio CHRYSOPHYTA

***HYDRURUS* C. Agardh – HYDRURACEAE**

***Hydrurus foetidis* (Vill.) Kirchner f. *penicillatus* Pascher**

1929. Stojanoff & Stefanoff, p. 8.
1940. Kitanov, p. 4.

Material: Thalus.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

II. Divisio PHAEOPHYTA

CYSTOSEIRA C. Agardh – CYSTOSEIRACEAE

Cystoseira partschii auct. bulg.

1962. Hadžiev & Palamarev, p. 6.
1966. Petkova & Kitanov, p. 2, Pl. 1, Fig. 1.
Rev. 1987. *Cystoseirites partschii* Sternb.; Palamarev & Petkova, p. 13, Pl. 1, Fig. 1.

***CYSTOSEIRITES* Sternb. – CYSTOSEIRACEAE**

***Cystoseirites partschii* Sternb.**

1821. Sternberg, p. 36, Pl. 11, Fig. 1.
1967. Petkova, p. 137, Pl. 1, Fig. 1; Pl. 9, Fig. 6.
1987. Palamarev & Petkova, p. 13, Pl. 1, Fig. 1.
1962. *Cystoseira partschii* auct. Hadžiev & Palamarev, p. 6.
1966. Petkova & Kitanov, p. 2, Pl. 1, Fig. 1.
Material: Thalus.
Location and stratigraphical range: Pelovo, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

III. Divisio CHAROPHYTA

***CHARA* Vaill. – CHARACEAE**

Chara palaeobalcanica Kitan. & Palam.

1963. Kitanov & Palamarev, p. 5, Pl. 1, Figs 3-6; Pl. 2, Figs 1-2.
Rev. *Nitellopsis palaeobalcanica* (Kitan. & Palam.) Palam., comb. nova, hoc loco.

***Chara palaeofoetida* Kitan. & Palam.**

1963. Kitanov & Palamarev, p. 6, Pl. 3, Figs 3-5.
Holotypus: Pl. 3, Figs 3-5, Kitanov & Palamarev (1963).
Material: Ca.
Location and stratigraphical range: Hadzhi Dimitur mine (Borovdol bituminous formation, Priabonian).
Collection: IB (BAS).

***CHARITES* Horn – CHARACEAE**

***Charites sadleri* (Unger) Horn**

1959. Horn af Rantzien, p. 58.
1972a. Palamarev, p. 1426, Figs 2a-c.
1850a. *Chara sadleri* Unger, p. 9, Pl. 2, Figs 7-9.
Material: Ca.
Location and stratigraphical range: Obrochishte (Galata Formation, Middle Miocene – Tchokrakian).
Collection: IB (BAS).

***Charites molassicus* (Straub) Horn**

1959. Horn af Rantzien, p. 59, Pl. 1, Figs 2-7.
1972a. Palamarev, p. 1425, Figs 1a-c.
1952. *Chara molassica* Straub, p. 466, Pl. A, Figs 1-3.
Material: Ca.

Location and stratigraphical range: Obrochishte (Galata Formation, Middle Miocene – Tchokrakian).
Collection: IB (BAS).

CROFTIELLA Horn – CHARACEAE

***Croftiella rochettiana* (Heer) Horn**

1959. Horn af Rantzien, p. 105.
1972a. Palamarev, p. 1427, Figs 4a-b.
1855. *Chara rochettiana* Heer, p. 26, Pl. 4, Figs 9a-b.
Material: Ca.
Location and stratigraphical range: Obrochishte (Galata Formation, Middle Miocene – Tchokrakian).
Collection: IB (BAS).

GRAMBASTICHARA Horn – CHARACEAE

***Grambastichara tornata* (C. Reid & J. Groves) Horn**

1959. Horn af Rantzien, p. 70, Pl. 4, Figs 1-6.
1980. Palamarev, p. 36, Pl. 1, Figs 3-4.
1921. *Chara tornata* C. Reid & J. Groves, p. 187, Pl. 5, Figs 1-3.
Material: Ca.
Location and stratigraphical range: Slakovtsi (Breznik molasse Formation, Lower Oligocene).
Collection: IB (BAS).

NITELLOPSIS Hy – CHARACEAE

***Nitellopsis merianii* (A. Braun ex Unger) Grambast & S.-Märsche**

1972. Grambast & S.-Märsche, p. 3.
1850a. *Chara merianii* Unger, p. 34.
1951. *C. merianii merianii*; Papp, p. 283, Pl. 1, Figs 3-4.
1955. *Tectochara merianii* (A. Braun ex Unger) Grambast subsp. merianii; Mädler, p. 278, Pl. 1, Figs 1-5.
1972b. Palamarev, p. 127, Pl. 1, Figs 1-6, 8.
Material: Ca.
Location and stratigraphical range: Belibreg basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Nitellopsis palaeobalcanica* (Kitan. & Palam.) Palam. comb. nova, hoc loco**

1963. *Chara palaeobalcanica* Kitan. & Palam.; Kitanov & Palamarev, p. 5, Pl. 1, Figs 3-4; Pl. 2, Figs 1-2.
Holotypus: Pl. 1, Figs 3-4, Kitanov & Palamarev (1963).
Material: Ca.
Location and stratigraphical range: Hadzhi Dimitur mine (Borovdol bituminous formation, Priabonian).
Collection: IB (BAS).

RHABDOCHARA Mädler emend. Grambast – CHARACEAE

***Rhabdochara stockmansii* Grambast**

1957. Grambast, p. 17, Pl. 8, Figs 10-14; Fig.-text 6.
1980. Palamarev, p. 35, Pl. 1, Figs 1, 5-6.
Material: Ca.
Location and stratigraphical range: Slakovtsi (Breznik molasse Formation, Lower Oligocene).
Collection: IB (BAS).

SPHAEROCHARA Mädler emend. Horn – CHARACEAE

***Sphaerochara bulgarica* Kitan. & Palam.**

1963. Kitanov & Palamarev, p. 4, Pl. 1, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Hadzhi Dimitur mine (Borovdol bituminous formation, Priabonian).
Collection: IB (BAS).

***Sphaerochara ulmensis* (Straub) Grambast**

1962. Grambast, p. 77.
1972a. Palamarev, p. 1427, Figs 4a-b.
1980. Palamarev, p. 37, Pl. 1, Fig. 2.
1952. *Chara ulmensis* Straub, p. 170, Pl. 17, Fig. 19.
Material: Ca.
Location and stratigraphical range: Slakovtsi (Breznik molasse Formation, Lower Oligocene); Obrochishte (Galata Formation, Middle Miocene – Tchokrakian).
Collection: IB (BAS).

TECTOCHARA L. & N. Grambast – CHARACEAE

Tectochara merianii (A. Braun ex Heer) Grambast subsp. *merianii*

1972b. Palamarev, p. 127, Pl. 1, Figs 1-6, 8.
Rev. *Nitellopsis merianii* (A. Braun ex Unger) Grambast & S.-Märsche; Palamarev, hoc loco.

IV. Divisio BRYOPHYTA

ORTHOTRICHUM Hedw. – ORTHOTRICHACEAE

***Orthotrichum* sp.**

1970. Palamarev, p. 38, Pl. 1, Figs 1-2.

Material: Li.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

V. Divisio LYCOPODIOPHYTA

SELAGINELLA Beauvais – SELAGINELLACEAE

***Selaginella pliocaenica* Dorof.**

1957. Dorofeev, p. 489, Fig.-text 1.1.
1970. Palamarev, p. 38.
1994a. Palamarev, p. 133, Pl. 1, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

VI. Divisio EQUISETOPHYTA

CAULINITES Brongn. – EQUISETACEAE

***Caulinites articulatus* Ettingsh.**

1853. Ettingshausen, p. 28, Pl. 4, Figs 13-15.
1963a. Palamarev, p. 209, Pl. 2.
1967. Palamarev, p. 92.
Material: Aerial stem impressions.
Location and stratigraphical range: Brezhani (Loulevska Formation, Lower Oligocene).
Collection: IB (BAS).

EQUISETUM L. – EQUISETACEAE

***Equisetum braunii* (Unger) Heer**

1855. Heer, p. 44, Pl. 14, Fig. 8.
1962b. Palamarev, p. 15.
1998a. Bozukov, p. 5, Pl. 1, Fig. 2
1850a. *Equisetites braunii* Unger, p. 60.
Material: Aerial stem impressions.
Location and stratigraphical range: Dospei (Bituminous shale formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Equisetum lombardianum* Saporta**

1868. Saporta, p. 422, Pl. 20, Figs 2-5.
1962. Kitanov & Palamarev, p. 3, Pl. 1, Figs 1-3.
2001. Palamarev & al., p. 280.
Material: Aerial stem impressions.
Location and stratigraphical range: Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

***Equisetum palustre* L. foss.**

1963. Jordanov & Kitanov, p. 25, Pl. 1, Figs 1-2.
Material: Aerial stem impressions.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Equisetum parlatori* (Heer) Schimp.**

1869. Schimper, p. 261.
1964a. Palamarev, p. 10, Pl. 1, Figs 1-2.
1998. Palamarev & al., p. 15.
1855. *Physagenia parlatori* Heer, p. 109.
Material: Rootstock tubercles impression.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

VII. Divisio POLYPODIOPHYTA

ACROSTICHUM L. – PTERIDACEAE

***Acrostichum lanzaeanum* (Vis.) E. Reid & Chandler**

1926. Reid & Chandler, p. 33, Pl. 1, Figs 1-5; Fig.-text 1.
1966. Palamarev & Petkova, p. 65.
1975. Palamarev & Petkova, p. 218, Pl. 6, Fig. 7.
1990. Palamarev & Petkova, p. 13, Pl. 4, Fig. 7; Pl. 5, Figs 3, 5.
1999b. Palamarev & al., p. 7, Pl. 1, Fig. 2.
1858. *Fortisia lanzaeana* Vis.; Visiani, p. 431, Pl. 1, Fig. 8; Pl. 2, Fig. 1.
1956. *Chrysodium lanzaeanum* (Vis.) Gardner & Ettingsh.; Baikovskaja, p. 404, Pl. 1, Fig. 1.
Material: Li..
Location and stratigraphical range: Pchelarovo (Sandy argillaceous formation, Upper Eocene); Logodash (Logodash Formation, Priabonian); Nikolaevo (Coalbearing formation, Priabonian); Oreshets (Lyer of massive darc gray limestone, Priabonian); Boukovska Mahala (Dolno Selo Formation, Upper Eocene); Gabrovo (Fine-graned sandstone lyers, Priabonian – Lower Oligocene); Smolyan (Smolyan Formation, Upper Eocene – Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Devin (Devin Formation, Lower Oligocene); Gorno Voivodino (Haskovo limnestone formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

ADIANTUM L. – PTERIDACEAE

***Adiantum* sp. aff. *A. anceps* Maxon & C. V. Morton**

1998a. Bozukov, p. 5, Fig. 4.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

ANEMIA Sw. – SCHIZAEACEAE

***Anemia subcretacea* (Saporta) Gardner & Ettingsh.**

1879. Gardner & Ettingshausen, p. 45, Pls 8-9.
1990. Palamarev & Petkova, p. 10, Pl. 1, Fig. 4; Pl. 3, Figs 3, 5.
1999a. Palamarev & al., p. 29.
1868. *Asplenium subcretaceum* Saporta, p. 315, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

ANGIOPTERIS Hoffm. – MARATTIACEAE

Angiopteris ruzinciniana Palam., Petkova & Uzunova

1975. Palamarev & al., p. 25, Pl. 1, Fig. 1; Pl. 2, Figs 1-3; Figs-text 1-3.
1987. Palamarev & Petkova, p. 14, Pl. 3, Figs 1-5.
Rev. 1992. *Eostangeria ruzinciniana* (Palam., Petkova & Uzunova) Palam. & Uzunova; Palamarev & Uzunova, p. 288, Pl. 1, Figs 1-6; Figs-text 2-3.

BLECHNUM L. – BLECHNACEAE

***Blechnum dentatum* (Göpp.) A. Braun**

1852. Braun, p. 558.
1990. Palamarev & Petkova, p. 17, Pl. 9, Fig. 3.
1995. Palamarev & Staneva, p. 116.
1836. *Aspidites dentatus* Göpp.; Göppert, p. 355, Pl. 21, Figs 7-8.
Material: Li.
Location and stratigraphical range: Dolno Fatovo (Fatovo Formation, Upper Eocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Blechnum* sp.**

1995. Palamarev & Staneva, p. 116.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

CHRYSODIUM L. – PTERIDACEAE

Chrysodium lanzaeanum (Vis.) Gardner & Ettingsh.

1956. Baikovskaja, p. 404, Fig. 1.
Rev. 1975. *Acrostichum lanzaeanum* (Vis.) E. Reid & Chandler; Palamarev & Petkova, p. 218.

CRYPTOGRAMMITES – PTERIDACEAE

***Cryptogrammites* sp.**

1963b. Palamarev, p. 70, Pl. 1, Fig. 1.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CYATHEA Sm. – CYATHEACEAE

***Cyathea* sp.**

1995. Palamarev & Staneva, p. 116.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

CYCLOSORUS Link – THELYPTERIDACEAE

***Cyclosorus dalmaticus* (Heer) Palam. & Petkova**

1975. Palamarev & Petkova, p. 216, Pl. 1, Fig. 1; Pl. 6, Figs 4-6.
1990. Palamarev & Petkova, p. 15, Pl. 6, Figs 1-3; Pl. 7, Figs 1-5; Pl. 8, Figs 1-2, 4; Pl. 9, Figs 1, 5.
1998a. Bozukov, p. 6, Pl. 2, Fig. 4.
1999b. Palamarev & al., p. 8, Pl. 1 Fig. 4; Pl. 10, Fig. 4.
1855. *Lastraea dalmatica* Heer, p. 33, Pl. 9, Fig. 1.
1962. *Dryopteris dalmatica* (Heer) Depape; Kitanov & Palamarev, p. 4, Pl. 2, Figs 2-3; Pl. 3, Figs 1-3.
Material: Li.
Location and stratigraphical range: Logodash (Logodash Formation, Priabonian); Gabrovo (Fine-graned sandstone lyers, Priabonian – Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Levochevo (Smolyan Formation, Upper Eocene – Lower Oligocene); Ustovo-Strazha (Smolyan Formation, Upper Eocene – Lower Oligocene); Devin (Devin Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Nikolaevo (Coalbearing formation, Priabonian); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Cyclosorus stiriacus* (Unger) Ching & Takht.**

1963. Ching & Takhtajan in Takhtajan, p. 195, Pl. 2, Figs 1-2.
1966. Palamarev & Petkova, p. 65.
1967. Petkova, p. 137, Pl. 1, Fig. 5.
1987. Palamarev & Petkova, p. 18, Pl. 1, Figs 8, 11.
1990. Palamarev & Petkova, p. 14, Pl. 4, Fig. 4; Pl. 7, Fig. 6; Pl. 8, Fig. 3.
1998a. Bozukov, p. 7, Pl. 2, Fig. 3
1998. Palamarev & al., pp. 14-15, 19.
1999b. Palamarev & al., p. 7, Pl. 1, Figs 3, 5.
1847. *Polypodites stiriacus* Unger, p. 121, Pl. 36, Figs 1-5.
1932. *Goniopteris stiriaca* (Unger) A. Braun; Konjarov, Pl. 12, Fig. 1; Pl. 13, Fig. 1; Pl. 24, Fig. 1; Pl. 38, Fig. 1.
1937. Konstantinov, p. 258, Pl. 1, Fig. 1.
1962. *Dryopteris stiriaca* (Unger) Palib.; Hadžiev & Palamarev, p. 5.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Oustovo-Strazha (Smolyan Formation, Upper Eocene – Lower Oligocene); Devin (Devin Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Momchilovtsi (Sandy argillaceous formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Pelovo, Karbintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

DAVALLIA Sm. – DAVALLIACEAE

***Davallia haidingeri* Ettingsh.**

1858. Ettingshausen, p. 50, Pl. 2, Fig. 5.
1995. Bozukov & Ivanov, p. 15, Pl. 1, Figs 1-5; Pl. 2, Figs 1-7.
1998a. Bozukov, p. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

DRYOPTERIS Adans. – DRYOPTERIDACEAE

Dryopteris dalmatica (Heer) Depape

1962. Kitanov & Palamarev, p. 4, Pl. 2, Figs 2-3; Pl. 3, Figs 1-3.
Rev. 1975. *Cyclosorus dalmaticus* (Heer) Palam. & Petkova; Palamarev & Petkova, p. 216, Pl. 1, Fig. 1; Pl. 6, Figs 4-6.

***Dryopteris denticulata* Iljinsk.**

1968. Iljinskaja, p. 34, Pl. 1, Figs 1-2; Pl. 31, Figs 4-5; Pl. 32, Figs 1-3.
1975. Palamarev & al., p. 31, Pl. 1, Figs 2-3; Pl. 2, Fig. 4.
1987. Palamarev & Petkova, p. 19, Pl. 1, Figs 5, 7; Pl. 2, Fig. 1.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Dryopteris stiriaca (Unger) Palib.

1962. Hadžiev & Palamarev, p. 5.
Rev. 1966. *Cyclosorus stiriacus* (Unger) Ching & Takht.; Palamarev & Petkova, p. 65.

***GLEICHENIA* Sm. – GLEICHENIACEAE**

***Gleichenia rhodopaea* Palam. & Petkova** (Plate I, Fig. 2).

1990. Palamarev & Petkova, p. 11, Pl. 1, Figs 5-5b; Pl. 3, Figs 1-2.
1988. Černjavska & al., p. 29, Pl. 1, Fig. 1.
Holotypus: Pl. 3, Fig. 1 (N SmP-49), Palamarev & Petkova (1990).
Material: Li.
Location and stratigraphical range: Hvoina, Orehovo (Hvoina sandy argillaceous Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***GONIOPTERIS* C. Presl – THELYPTERIDACEAE**

Goniopteris stiriaca (Unger) A. Braun

1932. Konjarov, p. 54, Pl. 12; Pl. 13, Fig. 1.
1937. Konstantinov, p. 358, Pl. 1, Fig. 1.
Rev. 1966. *Cyclosorus stiriacus* (Unger) Ching & Takht.; Palamarev & Petkova, p. 65.

***LINDSAEA* Dryand. ex Sm. – DENNSTAEDTIACEAE**

***Lindsaea freyeri* (Unger) Palam. & Petkova**

1975. Palamarev & Petkova in Palamarev & al., p. 30, Pl. 1, Fig. 4; Fig.-text 4.
1987. Palamarev & Petkova, p. 17, Pl. 2, Figs 5-5a.
1852. *Adiantites freyeri* Unger, p. 12, Pl. 4, Figs 15-16.
Lectotypus: 1852. Unger, Pl. 4, Fig. 15, selected by Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***LYGODIUM* Sw. – SCHIZAEACEAE**

***Lygodium gaudinii* Heer**

1855. Heer, p. 41, Pl. 13, Figs 5-15.
1966. Petkova & Kitanov, p. 4, Pl. 1, Fig. 5.
1987. Palamarev & Petkova, p. 15, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Pelovo, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Lygodium gaudinii Heer

1967. Petkova, p. 137, Pl. 1, Figs 2-4; Pl. 9, Figs 2-4a-b.
Rev. 1987. *Lygodium kaulfussii* Heer; Palamarev & Petkova, p. 15, Pl. 1, Figs 2-3.

***Lygodium kaulfussii* Heer**

1861. Heer, p. 3, Pl. 8, Fig. 21; Pl. 9, Fig. 1.
1987. Palamarev & Petkova, p. 15, Pl. 2, Figs 2-3.
1967. *L. gaudinii* Heer; Petkova, p. 137, Pl. 1, Figs 2-4; Pl. 9, Figs 2-4a-b.
Material: Li.
Location and stratigraphical range: Pelovo, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***OSMUNDA* L. – OSMUNDACEAE**

***Osmunda heeri* Gaudin**

1856. Gaudin in Gaudin & De la Harpe, p. 29.
1990. Palamarev & Petkova, p. 9, Pl. 3, Fig. 4.
1999a. Palamarev & al., p. 29, Pl. 4, Fig. 5.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

***Osmunda parschlugiana* (Unger) Andr.**

1959. Andreanzky, p. 49, Pl. 7, Fig. 4.
1964a. Palamarev, p. 10, Pl. 1, Figs 3-4; Fig.-text 57.2.
1998a. Bozukov, p. 5, Pl. 2, Figs 1-2.
1847. *Pteris parschlugiana* Unger, p. 122, Pl. 36, Fig. 6.
1932. Konjarov, p. 54, Pl. 13, Fig. 2; p. 244, Pl. 73, Fig. 1.

Material: Li.
Location and stratigraphical range: Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

PTERIDIUM Gled. ex Scop. – DENNSTAEDTIACEAE

***Pteridium aquilinum* (L.) Kuhn foss.**

1929. Stojanoff & Stefanoff, p. 9, Pl. 1, Figs 1-3; Fig.-text 1.
1984. Kitanov, p. 44, Fig. 3.3.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Middle Pontian – Lower Dacian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Pteridium bilinicum* (Ettingsh.) Iljinsk.**

1983. Iljinskaja in Shvareva, p. 50, Pl. 1, Figs 1-2; Pl. 18, Figs 1-2; Figs-text 8.1-2.
1990. Palamarev & Petkova, p. 14, Pl. 2, Fig. 2; Pl. 4, Fig. 5.
1867. *Pteris bilinicum* Ettingsh.; Ettingshausen, p. 14, Pl. 3, Figs 14-15.
Material: Li.
Location and stratigraphical range: Momchilovtsi (Sandy argillaceous formation, Lower Oligocene).
Collection: IB (BAS).

***Pteridium oeningense* (Unger) Hantke**

1954. Hantke, p. 40, Pl. 1, Figs 6-7.
1964a. Palamarev, p. 11.
1982. Palamarev, p. 5.
1998a. Bozukov, p. 6, Pl. 1, Fig. 3
1998. Palamarev & al., p. 15.
1847. *Pteris oeningense* Unger, p. 124, Pl. 37, Figs 6-7.
1932. *Pteris* aff. *P. oeningensis*; Konjarov, p. 54, Pl. 13, Fig. 7; Pl. 14, Fig. 1.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

PTERIS L. – PTERIDACEAE

Pteris aff. *P. oeningensis* Unger

1932. Konjarov, p. 54, Pl. 13, Fig. 7; Pl. 14, Fig. 1.
Rev. 1964a. *Pteridium oeningense* (Unger) Hantke; Palamarev, p. 11.

Pteris parschlugiana Unger

1932. Konjarov, p. 54, Pl. 13, Fig. 2.
Rev. 1964a. *Osmunda parschlugiana* (Unger) Andr.; Palamarev, p. 10, Pl. 1, Figs 3-4.

***Pteris pennaeformis* Heer**

1855. Heer, p. 38, Pl. 12, Figs 1a-b.
1987. Palamarev & Petkova, p. 16, Pl. 1, Figs 6, 9-10.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

RUMOHRA Raddi – DRYOPTERIDACEAE

***Rumohra recentior* (Unger) Barthel**

1976. Barthel, p. 457, Pl. 80, Figs 1-10; Pl. 81, Fig. 2; Figs-text 6a-d.
1990. Palamarev & Petkova, p. 15, Pl. 4, Fig. 6; Pl. 5, Figs 1-2.
1999a. Palamarev & al., p. 29, Pl. 2, Fig. 1.
1999b. Palamarev & al., p. 7, Pl. 1, Fig. 1.
1847. *Sphenopteris recentior* Unger, p. 123, Pl. 37, Fig. 4.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

SALVINIA Seg. – SALVINIACEAE

***Salvinia cerebrata* Nikitin ex Dorof.**

1955. Dorofeev, p. 147, Pl. 1, Fig. 1.
1948. Nikitin, p. 1106 (nom. nudum).
1971. Palamarev, p. 155, Pl. 22, Fig. 1.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Salvinia formosa Heer

1932. Konjarov, p. 98, Pl. 24, Figs 2-2a.
1937. Konstantinov, p. 259, Pl. 1, Figs 2-3.
Rev. 1987. *Salvinia mildeana* Göpp. s.l.; Palamarev & Petkova, p. 21, Pl. 2, Fig. 6.

***Salvinia mildeana* Göpp. s.l.**

1855. Göppert, p. 5, Pl. 1, Figs 21-23.
1966. Petkova & Kitanov, p. 3, Pl. 1, Fig. 6.
1987. Palamarev & Petkova, p. 21, Pl. 2, Fig. 6.
1998. Palamarev & al., pp. 14-15, 19.
1859. *S. formosa* Heer, p. 156, Pl. 145, Figs 13a-b, 15.
1932. Konjarov, p. 98, Pl. 24, Figs 2-2a.
1937. Konstantinov, p. 259, Pl. 1, Figs 2-3.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***TRICHOMANES* L. – HYMENOPHYLLACEAE**

***Trichomanes saccii* Squinab.**

1889. Squinaboll, p. 30, Pl. 3, Fig. 6.
1988. Černjavska & al., p. 30, Pl. 1, Fig. 4.
1990. Palamarev & Petkova, p. 12, Pl. 4, Figs 1-3.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***WOODWARDIA* Sm. – BLECHNACEAE**

Woodwardia roessneriana (Unger) Heer

1964a. Palamarev, p. 11, Pl. 2, Figs 1-2; Fig.-text 1.
1967. Petkova, p. 137, Pl. 1, Fig. 6.
Rev. 1987. *Woodwardia muensteriana* (C. Presl) Kräusel s.l.; Palamarev & Petkova, p. 20, Pl. 1, Figs 2-4.

***Woodwardia muensteriana* (C. Presl) Kräusel**

1921. Kräusel, p. 366, Pl. 11, Figs 2, 6-8; Pl. 12, Fig. 4.
1987. Palamarev & Petkova, p. 20, Pl. 1, Figs 2-4.
1964a. *W. roessneriana* (Unger) Heer; Palamarev, p. 11, Pl. 2, Figs 1-2; Fig.-text 1.
1967. Petkova, p. 137, Pl. 1, Fig. 6.
1833. *Pecopteris muensteriana* C. Presl in Sternberg, p. 154, Pl. 36, Fig. 2.
1964a. *Woodwardites muensterianus* (C. Presl) A. Braun; Palamarev, p. 11, Pl. 2, Fig. 3; Fig.-text 2.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Pelovo, Rouzhintsi (Krivodol Formation, Volhynian); Belo Pole (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***WOODWARDITES* C. Presl – BLECHNACEAE**

Woodwardites muensterianus (C. Presl) A. Braun

1964a. Palamarev, p. 11, Pl. 2, Fig. 3; Fig.-text 2.
Rev. 1987. *Woodwardia muensteriana* (C. Presl) Kräusel; Palamarev & Petkova, p. 20, Pl. 1, Figs 2-4.

VIII. Divisio PINOPHYTA

1. Class CYCADOPSIDA

***EOSTANGERIA* Barthel – ZAMIACEAE**

***Eostangeria ruzinciniana* (Palam., Petkova & Uzunova) Palam. & Uzunova**

1992. Palamarev & Uzunova, p. 288, Pl. 1, Figs 1-6; Figs-text 2-3.
2001. Uzunova & al., p. 179, Pl. 1, Figs 1-4; Pl. 2, Figs 1-5.
1975. *Angiopteris ruzinciniana* Palam., Petkova & Uzunova; Palam & al., p. 25, Pl. 1, Fig. 1; Pl. 2, Figs 1-3; Figs-text 1-3.
1987. Palamarev & Petkova, p. 14, Pl. 3, Figs 1-5.
Holotypus: Pl. 1, Fig. 1; Pl. 2, Figs 1-3, (N R-3617), Palamarev & al. (1975).
Material: Li, Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

2. Class GINKGOPSIDA

GINKGO L. – GINKGOACEAE

***Ginkgo adiantoides* (Unger) Heer**

1878. Heer, p. 21, Pl. 2, Figs 7-10.
1987. Palamarev & Petkova, p. 22, Pl. 4, Fig. 4.
1963. *G. biloba* L. foss.; Jordanov & Kitanov, p. 35, Pl. 1, Fig. 1.
1982. Kitanov, p. 35, Pl. 1, Fig. 1.
1850a. *Salisburia adiantoides* Unger, p. 392.
Material: Li.
Location and stratigraphical range: Belo Pole (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Zemlyane (Lozenets Formation, Romanian).
Collection: IB (BAS).

Ginkgo biloba L. foss.

1963. Jordanov & Kitanov, p. 35, Pl. 1, Fig. 1.
1982. Kitanov, p. 35, Pl. 1, Fig. 1.
Rev. 1987. *Ginkgo adiantoides* (Unger) Heer; Palamarev & Petkova, p. 22, Pl. 4, Fig. 4.

***Ginkgo occidentalis* Samylina**

1967. Samylina, p. 311, Pl. 1, Figs 1-8.
1988. Palamarev & Kitanov, p. 184, Pl. 1, Figs 1-3; Pl. 2, Figs 1-2; Pl. 3, Fig. 1; Fig.-text 2.
Material: Li, Cu.
Location and stratigraphical range: Belibreg basin – Gaber (Novi Iskur Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

3. Class GNETOPSIDA

EPHEDRA L. – EPHEDRACEAE

***Ephedra* aff. *campylopoda* C.A. Mey.**

1929. Stojanoff & Stefanoff, p. 25, Figs 3-4; Pl. 4, Fig. 1; Fig.-text 5.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

4. Class PINOPSIDA

ABIES Mill. – PINACEAE

***Abies alba* Mill. foss.**

1929. Stojanoff & Stefanoff, p. 16, Pl. 1, Figs 15-22; Fig.-text 3.
1932. Konjarov, p. 166, Pl. 53, Fig. 2.
1934. Stefanov & Jordanov, p. 4, Pl. 3, Fig. 3; Pl. 4, Figs 6-9.
1935. Stefanov & Jordanov, p. 15, Fig. 11; Pl. 2, Figs 10-11.
1984. Kitanov, p. 45, Fig. 4.6.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Abies garmensis* Kitan. fil.** (Plate I, Fig. 4).

1980. Kitanov, p. 93, Pl. 1, Figs 1-3.
Holotypus: Pl. 1, Fig. 1, (N G-2734), Kitanov, (1980).
Material: Ca.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

AMENTOTAXUS Pilg. – TAXACEAE

***Amentotaxus* cf. *gladifolia* (Ludw.) Ferguson, Jähnichen & Alvin**

1978. Ferguson & al., p. 187, Pl. 24, Fig. 1; Pl. 25, Figs 1-3; Pl. 27, Figs 1-3; Pl. 28, Fig. 1; Pl. 30, Figs 1-3; Pl. 31, Figs 1-2; Pl. 32, Figs 1-2; Pl. 33, Figs 1-4; Pl. 34, Fig. 1; Pl. 35, Fig. 1; Pl. 36, Figs 1-6; Pl. 37, Figs 1-3; Pl. 38, Figs 1-2; Pl. 39, Figs 1-2.
1991. Palamarev & al., p. 6, Pl. 4, Figs 3, 6-7.
1998a. Bozukov, p. 9.
1857. *Pteris gladifolia* Ludw.; Ludwig, p. 154, Pl. 33, Figs 11a-b.
Material: Cu, Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

ARCEUTHOS Antoine & Kotschy – CUPRESSACEAE

Arceuthos* aff. *A. drupacea (Labill.) **Antoine & Kotschy**
(= Juniperus drupacea Labill.)

1935. Stefanov & Jordanov, p. 25, Pl. 5, Figs 2-3; Fig.-text 23.
Note: see *Juniperus* sp. aff. *J. drupacea* Labill.

ATHROTAXIS D. Don – TAXODIACEAE

***Athrotaxis couttsiae* (Heer) Gardner**

1884. Gardner, p. 90, Pl. 6, Figs 1-9; Pl. 10, Figs 6, 9.
1991. Palamarev & Petkova, p. 27, Pl. 4, Fig. 7.
1862. *Sequoia couttsiae* Heer, p. 1051, Pl. 59, Figs 4, 18-19; Pl. 60, Figs 21-34, 41-42, 48.
Material: Li.
Location and stratigraphical range: Momchilovtsi (Sandy argillaceous formation, Lower Oligocene).
Collection: IB (BAS).
Note: According to Kunzmann (1999) *Sequoia couttsiae* belongs to *Quasisequoia* Sriniv. & Friis.

BIOTA (D. Don) Endl. – CUPRESSACEAE
Syn. *THUJA* L. – CUPRESSACEAE

***Biota* (*Thuja*) sp. aff. *B. orientalis* L.**

1935. Stefanov & Jordanov, p. 22, Fig. 19; Pl. 4, Figs 3-4.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

CEDRUS Trew – PINACEAE

***Cedrus atlantica* (Endl.) Manetti foss.**

1984. Kitanov, p. 47, Figs 3-4.
1929. *Cedrus* aff. *libani* A. Rich.; Stojanoff & Stefanoff, p. 17, Figs 1-2; Pl. 2, Figs 1-6; Fig.-text 4.
1934. *Cedrus* aff. *C. libanitica* Trew; Stefanov & Jordanov, p. 5, Pl. 4, Fig. 11.
1935. *Cedrus* aff. *libanica* Trew; Stefanov & Jordanov, p. 16, Fig. 12; Pl. 2, Figs 9, 12-14.
Material: Ca.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Cedrus aff. *C. libanitica* Trew

1934. Stefanov & Jordanov, p. 5, Pl. 4, Fig. 11.
1935. Stefanov & Jordanov, p. 16, Pl. 2, Figs 9, 12-14; Fig.-text 12.
Rev. 1984. *Cedrus atlantica* Manetti foss.; Kitanov, p. 47, Figs 3-4.

Cedrus aff. *libani* A. Rich.

1929. Stojanov & Steffanoff, p. 17, Figs 1-2; Pl. 2, Figs 1-6; Fig.-text 4.
Rev. 1984. *Cedrus atlantica* (Endl.) Manetti foss.; Kitanov, p. 47, Figs 3-4.

CEPHALOTAXUS Siebold & Zucc. – CEPHALOTAXACEAE

***Cephalotaxus drupacea* Siebold & Zucc. foss.**

1972. Kitanov, p. 170, Pl. 1, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Cephalotaxus fortunei* Hook. foss.**

1934. Stefanov & Jordanov, p. 8, Pl. 1, Figs 3-4; Fig.-text 4.
1984. Kitanov, p. 45, Fig. 3.2a.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

CHAMAECYPARIS Spach – CUPRESSACEAE

***Chamaecyparis obtusa* (Siebold & Zucc.) Endl. foss.**

1982. Palamarev, p. 7, Pl. 2, Figs 5-10.
Material: Ca, Li.
Location and stratigraphical range: Melnik (Kalimantsi Formation, Lower Pontian).
Collection: IB (BAS).

***Chamaecyparis belgica* Saporta & Marion**

1873. Saporta & Marion, p. 31, Pl. 1, Fig. 3.
1988. Černjavska & al., p. 30, Pl. 1, Fig. 7.

1991. Palamarev & Petkova, p. 29, Pl. 6, Figs 6-7, 10.
1995. Palamarev & Staneva, p. 116.
Material: Li.
Location and stratigraphical range: Dolno Fatovo (Fatovo Formation, Upper Eocene); Plovdivtsi (Lyer of fawn aleurolite, Upper Eocene); Hvoina (Hvoina sandy argillaceous formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

Chamaecyparis sp. aff. *C. lawsoniana* (Murray) Parl.

1934. Stefanov & Jordanov, p. 7, Pl. 3, Fig. 5; Pl. 4, Fig. 17.
Material: Li.
Location and stratigraphical range: Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

CRYPTOMERIA D. Don – TAXODIACEAE

Cryptomeria rhenana Kilpper

1968. Kilpper, p. 104, Pl. 34, Figs 23-30; Pl. 35, Figs 1-8; Pl. 38, Figs 3-4; Figs-text 1-4.
1991. Palamarev & al., p. 4, Pl. 2, Figs 5-8; Pl. 3, Figs 1-3, 5-6.
1998a. Bozukov, p. 8.
Material: Li, Cu.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Cryptomeria cf. *sternbergii* Göpp.

1966. Palamarev & Petkova, p. 51, Pl. 1, Fig. 2; Pl. 2, Figs 1, 3-4; Pl. 4, Fig. 1; Figs-text 1a-b;.
Rev. 1991. *Doliostrobus taxiformis* (Sternb.) Kvaček; Palamarev & Petkova, p. 26, Pl. 2, Figs 4-6; Pl. 3, Figs 1, 4-6.

CUNNINGHAMIA R. Br. – TAXODIACEAE

Cunninghamia miocaenica Ettingsh.

1872. Ettingshausen, p. 11, Pl. 1, Fig. 30a.
1978. Palamarev & al., p. 7, Pl. 2, Figs 1, 3-4; Pl. 3, Fig. 1; Pl. 4, Figs 1, 2.
1987. Palamarev & Petkova, p. 26, Pl. 5, Figs 1-8.
1967. Palamarev, p. 92.
1966. *Cunninghamia* cf. *lanceolata* (Lam.) Hook. foss.; Palamarev & Petkova, p. 58, Pl. 5, Fig. 2; Fig.-text 6.
1965. *Metasequoia glyptostroboides* Hu & Chaney foss.; Stefanov & al., p. 2, Figs 1a-g.
1984. Kitanov, p. 49, Fig. 5: 4.
Material: Cu, Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Makresh, Rouzhintsi, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Cunninghamia cf. *lanceolata* (Lam.) Hook.

1966. Palamarev & Petkova, p. 58, Pl. 5, Fig. 2; Fig.-text 6.
1967. Palamarev, p. 92.
Rev. 1987. *Cunninghamia miocaenica* Ettingsh.; Palamarev & Petkova, p. 26, Pl. 5, Figs 1-8.

CUPRESSITES Endl. – CUPRESSACEAE

Cupressites goeppertii Ettingsh.

1853. Ettingshausen, p. 34, Pl. 5.4.
1963a. Palamarev, p. 208, Fig.-text 1.
1967. Palamarev, p. 92.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CUPRESSUS L. – CUPRESSACEAE

Cupressus aff. *torulosa* D. Don

1994b. Palamarev, p. 24, Pl. 1, Figs 3, 6.
Material: Li.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Cupressus sempervirens L. foss.

1929. Stojanoff & Stefanoff, p. 23, Fig. 2; Pl. 3, Figs 1-12; Fig.-text 5.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***DOLIOSTROBUS* Marion – TAXODIACEAE**

***Doliostrobus taxiformis* (Sternb.) Kvaček**

1971b. Kvaček, p. 118, Pl. 31. Figs 8-12, 15-16; Pl. 32, Figs 1-5.
1975. Palamarev & Petkova, p. 208, Pl. 4, Figs 1-3.
1988. Černjavska & al., p. 30, Pl. 1, Figs 5-6.
1991. Palamarev & Petkova, p. 26, Pl. 2, Figs 4-6; Pl. 3, Figs 1-4, Pl. 4, Figs 1, 4-6.
1995. Palamarev & Staneva, p. 116.
1999b. Palamarev & al., p. 8, Pl. 8, Fig. 3.
1833. *Cystoseirites taxiformis* Sternb.; Sternberg, p. 35, Pl. 18, Figs 1-3.
1932. *Sequoia langsdorfii* auct. non Heer; Konjarov, p. 228, Pl. 69, Fig. 4.
1966. *Cryptomeria* cf. *sternbergii* auct. non Gardner; Palamarev & Petkova, p. 51, Pl. 1, Fig. 2; Pl. 2, Figs 3-4, Pl. 4, Fig. 1; Figs-text 1a-b.

Material: Ca, Cu, Li.

Location and stratigraphical range: Goudevitsa, Luga (Goudevitsa Formation, Upper Eocene); Palovska Cheshma (Palovska Formation, Upper Eocene); Pchelarovo (Continental formation, Upper Eocene); Gorno Voivodino (Haskovo limnestone formation, Upper Eocene – Lower Oligocene); Braikovitsa (Luka Formation, Upper Eocene – Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Hvoina (Hvoina sandy argillaceous formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene); Ravnishta (Upper Eocene – Lower Oligocene); Devin (Devin Formation, Lower Oligocene); Levochevo-Pisanitsa (Smolyan formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous, Lower Oligocene); Pustrogor (Pustrogor Formation, Lower Oligocene); Selcha (Devin Formation, Lower Oligocene); Smolyan (Coalbearing formation, Lower Oligocene); Stikul (Sandy argilaceous formation, Lower Oligocene); Perperek (Sandy argillaceous lyers, Lower Oligocene); Vulche Pole (Vulche Pole Formation, Upper Oligocene – Lower Miocene).

Collection: IB (BAS).

***GLYPTOSTROBUS* Endl. – TAXODIACEAE**

***Glyptostrobus* cf. *borysthenicus* Dorof.**

1974e. Dorofeev, p. 7, Pl. 1, Figs 1-7; Figs-text 1, 3-4.
1989. Palamarev, p. 45, Pl. 1, Figs 1-3.

Material: Ca.

Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).

Collection: IB (BAS).

***Glyptostrobus europaeus* (Brongn.) Unger**

1850a. Unger, p. 434.
1961. Palamarev, p. 177, Pl. 1, Fig. 2; Fig.-text 1.
1964a. Palamarev, p. 13.
1966. Petkova & Kitanov, p. 5, Pl. 1, Fig. 2.
1967. Petkova, p. 137, Pl. 1, Fig. 8; Pl. 9. Fig. 6.
1970. Palamarev, p. 38, Pl. 1, Figs 3-4.
1984. Uzunova, p. 73, Pl. 1, Figs 4-5.
1984. Kitanov, p. 49, Fig. 3.2b.
1987. Palamarev & Petkova, p. 25, Pl. 4, Figs 5, 8.
1994a. Palamarev, p. 133.
1998. Palamarev & al., p. 15.
2001. Uzunova, p. 3, Pl. 1, Fig. 4.
1929. *Glyptostrobus* aff. *heterophyllus* Endl.; Stojanoff & Stefanoff, p. 11, Pl. 1, Figs 4-5; Figs-text. 2.11-14.
1932. Konjarov, p. 54, Pl. 14, Fig. 2; p. 128, Pl. 38, Figs 5-6; p. 166, Pl. 53, Fig. 1.
1934. Stefanov & Jordanov, p. 1.
1833. *Taxodium europaeum* Brongn.; Brongniart, p. 168.

Material: Ca, Cu, Li.

Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian); Bela Rada, Stavertsi (Krivodol Formation, Volhynian – Bessarabian); Karbintsi, Koshava (Krivodol Formation, Bessarabian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Razlog (Razlog coalbearing formation, Lower Pontian – Lower Dacian); East Maritsa basin – Troyanovo North (Maritsa Formation, Middle Miocene – Upper Miocene); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian), Kutina (Gnilyane Formation, Lower Pontian), Novi Iskur (Novi Iskur Formation, Upper Pontian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Ognyanovo (Baldevo Formation, Upper Pontian – Lower Dacian).

Collection: IB (BAS).

Glyptostrobus sp. aff. *G. heterophyllus* Endl.

1929. Stojanoff & Stefanoff, p. 11, Pl. 1, Figs 4-5; Figs-text 2.11-14.

1934. Stefanov & Jordanov, p. 1.
Rev. *Glyptostrobus europaeus* (Brongn.) Unger; Palamarev, hoc loco.

HELLIA Endl. – CUPRESSACEAE

Hellia salicornioides Unger

1966. Palamarev & Petkova, p. 66.
1967. Palamarev, p. 92.
Rev. 1987. *Libocedrites salicornioides* (Unger) Endl.; Palamarev & Petkova, p. 28, Pl. 6, Figs 10-12.

JUNIPERUS L. – CUPRESSACEAE

***Juniperus brevifolia* Antoine foss.**

1972. Kitanov, p. 174, Pl. 2, Fig. 2.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Juniperus* sp. aff. *J. communis* L.**

1956. Kitanov & Nikolova, p. 87.
Material: Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Juniperus* sp. aff. *J. drupacea* Labill. foss.**

1967. Palamarev, p. 92.
1935. *Arceuthos* aff. *A. drupacea* (Zabill.) Ant. & Kotschy; Stefanov & Jordanov, p. 25, Pl. 5, Figs 2, 3; Fig.-text 23.
Material: Li
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Juniperus excelsa* M. Bieb.**

1960. Kitanov, p. 369, Pl. 1, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Operata (Lozenets Formation, Romanian).
Collection: Unkown.

***Juniperus* sp. aff. *J. foetidissima* Willd.**

1935. Stefanov & Jordanov, p. 24, Pl. 5, Fig. 1; Fig.-text 21.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Juniperus oxycedrus* L. foss.**

1935. Stefanov & Jordanov, p. 25, Pl. 4, Figs 8-9; Fig.-text 22;.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

LARIX Mill. – PINACEAE

***Larix* sp. aff. *L. decidua* Mill.**

1984. Kitanov, p. 45, Figs 4-5.
1935. *Larix europaea* Lam. & DC.; Stefanov & Jordanov, p. 14, Pl. 2, Figs 4-8; Fig.-text 10.
Material: Ca.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Larix europaea Lam. & DC.

1935. Stefanov & Jordanov, p. 14, Fig.-text 10; Pl. 2, Figs 4-8.
Rev. 1984. *Larix* sp. aff. *L. decidua* Mill.; Kitanov, Figs-text 4-5.

LIBOCEDRITES Endl. – CUPRESSACEAE

***Libocedrites salicornioides* (Unger) Endl.**

1847. Endlicher, p. 275.
1932. Konjarov, p. 138, Pl. 38, Figs 2-3.
1966. Petkova & Kitanov, p. 5, Pl. 1, Fig. 3.
1975. Palamarev & Petkova, p. 205.
1987. Palamarev & Petkova, p. 28, Pl. 6, Figs 10-12.
1991. Palamarev & al., p. 5, Pl. 3, Figs 4, 7; Pl. 4, Fig. 8.
1995. Palamarev & Staneva, p. 116.
1998a. Bozukov, p. 9.
1998. Palamarev & al., p. 15.
1841. *Thuytes salicornioides* Unger, p. 11, Pl. 2, Figs 1-4.
1838. *Hellia salicornioides* Unger, p. 101 (nom. illegit.).
1966. Palamarev & Petkova, p. 66.

1967. Palamarev, p. 92.
Material: Cu, Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Devin (Devin Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi, Tolovitsa, Vidin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

LIBOCEDRUS Endl. – CUPRESSACEAE

Libocedrus salicornioides Unger

1932. Konjarov, p. 128, Pl. 38, Fig. 2.
1966. Petkova & Kitanov, p. 5, Pl. 1, Fig. 3.
Rev. 1987. *Libocedrites salicornioides* (Unger) Endl.; Palamarev & Petkova, p. 28, Pl. 6, Figs 10-12.

METASEQUOIA Miki ex Hu & Cheng – TAXODIACEAE

Metasequoia glyptostroboides Hu & Cheng foss.

1965. Stefanov & al., p. 2, Figs 1a-g.
1984. Kitanov, p. 49, Fig. 5: 4.
Rev. 1987. *Cunninghamia miocenica* Ettingsh.; Palamarev & Petkova, p. 26, Pl. 5, Figs 1-8.

PICEA A. Dietr. – PINACEAE

***Picea excelsa* (Lam.) Link [= *P. abies* (L.) Karst.]**

1929. Stojanoff & Stefanoff, p. 72, Figs 1-6; Pl. 1, Figs 7-11; Fig.-text 2.
1934. Stefanov & Jordanov, p. 4, Pl. 3, Fig. 2; Pl. 4, Figs 4-5.
1935. Stefanov & Jordanov, p. 13, text-Fig. 8; Pl. 2, Figs 1-3.
Material: Ca, Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Picea heisseana* Fritsch**

1884. Fritsch, p. 425, Pl. 26, Figs 6-12.
1997. Mai & Palamarev, p. 483, Pl. 1, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Picea* sp. aff. *P. schrenkiana* Fisch. & C.A. Mey. and *P. morinda* Link**

1935. Stefanov & Jordanov, p. 14, Fig.-text 9.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

PINUS L. – PINACEAE

***Pinus brevis* Ludw.**

1857. Ludwig, p. 89, Pl. 19, Fig. 1.
1991. Palamarev & al., p. 2, Pl. 1, Figs 3, 6.
1998a. Bozukov, p. 7.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Pinus brutia* Ten. foss.**

1972. Kitanov, p. 173, Pl. 1, Figs 2-3.
1984. Kitanov, p. 47, Figs 4.7-8; Fig. 5.1.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Pinus cembra* L. foss.**

1935. Stefanov & Jordanov, p. 16, Pl. 2, Figs 15-18; Fig.-text 13.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Pinus geanthracis* (Göpp.) Rchb.**

1919. Reichenbach in Kräusel, p. 116, Pl. 10, Figs 32-34; Pl. 11, Figs 2-3.

1987. Palamarev & Petkova, p. 23, Pl. 4, Figs 1-3, 9.
1850. *Piceites geanthracis* Göpp.; Göppert, p. 109.
Material: Ca.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Pinus hampeana* (Unger) Heer**

1855. Heer, p. 56, Pl. 20, Fig. 4.
1991. Palamarev & al., p. 2, Pl. 1, Figs 4-5.
1998a. Bozukov, p. 7.
1847. *Pitys hampeana* Unger, p. 78, Pl. 20, Figs 1-3.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Pinus hepios* Unger**

1852. Unger, p. 25, Pl. 13, Figs 6-9.
1961. Palamarev, p. 178, Fig.-text 2.
1964a. Palamarev, p. 13.
1967. Palamarev, p. 92.
Material: Ca, Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Pinus laricio Poir. foss.

1929. Stojanoff & Stefanoff, p. 20, Figs 5-6; Pl. 3, Figs 2-3; Fig.-text 4.
1935. Stefanov & Jordanov, p. 21, Pl. 4, Fig. 2.
Rev. 1984. *Pinus pallasiana* Lamb. foss.; Kitanov, p. 47, Figs 5.2-3.

***Pinus laricioides* Menzel**

1900. Menzel, p. 66, Pl. 3, Fig. 16.
1987. Palamarev & Petkova, p. 24, Pl. 4, Fig. 7.
Material: Li.
Location and stratigraphical range: Pelovo, Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Pinus maritima Poir. foss.

1935. Stefanov & Jordanov, p. 20, Pl. 4, Fig. 1; Fig.-text 17.
Rev. 1984. *Pinus pinaster* Aiton foss.; Kitanov, p. 49, Fig. 8.3.

***Pinus neptuni* (Unger) Palam.**

1991. Palamarev in Palamarev & al., p. 3, Pl. 2, Figs 1-2.
1998a. Bozukov, p. 7.
1850a. *Pinites neptuni* Unger, p. 368.
1852. Unger, p. 29, Pl. 15, Figs 4-5.
Lectotypus: Pl. 2, Figs 1-2, (Sat-1920, 1526), selected by Palamarev (Palamarev & al. 1991).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Pinus palaeoeuropaea* (Unger) Palam. & Petkova**

1991. Palamarev & Petkova, p. 24, Pl. 2, Fig. 1.
1988. Černjavska & al., p. 30, Pl. 1, Fig. 2.
1852. *Pinites pseudostrobus* Unger, p. 23, Pl. 12, Figs 16-17.
Lectotypus: 1852. Unger, Pl. 12, Fig. 16, selected by Palamarev & Petkova (1991).
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Pinus palaeopinaster* Palam.**

1962b. Palamarev, p. 15, Fig. 1a.
1883. *Pinus* typus *pinaster* Friedrich, p. 220, Pl. 29, Figs 1-1a.
Holotypus: p. 15, Fig. 1a, Palamarev (1962b).
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Upper Oligocene).
Collection: IB (BAS).

***Pinus palaeorhodopaensis* Palam. & Petkova** (Plate I, Fig. 1).

1991. Palamarev & Petkova, p. 24, Pl. 1, Figs 2, 5; Pl. 2, Figs 2-3.
1995. Palamarev & Staneva, p. 116.
2001. Palamarev & al., p. 280, Pl. 2, Fig. 5.
Holotypus: Pl. 1, Fig. 5, (N SmPS-92), Palamarev & Petkova (1991).
Material: Li.
Location and stratigraphical range: Dolno Fatovo (Fatovo Formation, Upper Eocene); Borino (Bori-

no Formation, Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Pinus pallasiana* Lamb. foss.**

1984. Kitanov, p. 47, Figs 5.2-3.
1929. *Pinus* aff. *P. laricio* Poir.; Stojanoff & Stefanoff, p. 20, Figs 5-6; Pl. 3, Figs 2-3; Fig.-text 4.
1935. *P. laricio* Poir.; Stefanov & Jordanov, p. 21, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Pinus peuce* Griseb. foss.**

1935. Stefanov & Jordanov, p. 17, Pl. 3, Figs 1-5; Fig.-text 14.
1984. Kitanov, p. 47, Figs 4.3-4.
1929. *Pinus* sp. Sect. *Strobus*; Stojanoff & Stefanoff, p. 22, Fig. 3; Pl. 3, Figs 5-8; Fig.-text 4, det. Kitanov 1984, p. 47, Figs 4.3-4.
1934. *P. peuce* Griseb. (*P. strobus* L. foss. Geyl. & Kink., *Pinus* sp. sect. *Strobus* Spach); Stefanov & Jordanov, p. 5, Pl. 1, Fig. 1; Pl. 4, Fig. 10.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Pinus pinaster* Aiton foss.**

1984. Kitanov, p. 49, Fig. 8.3.
1935. *P. maritima* Poir.; Stefanov & Jordanov, p. 20, Pl. 4, Fig. 1; Fig.-text 17.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Pinus princeps* Saporta**

1865. Saporta, p. 193, Pl. 3, Fig. 7.
1991. Palamarev & al., p. 4, Pl. 2, Figs 3-4.
1998a. Bozukov, p. 7.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Pinus rigios* (Unger) Ettingsh.**

1866. Ettingshausen, p. 41, Pl. 13, Figs 11-12.
1988. Černjavska & al., p. 30.
1991. Palamarev & Petkova, p. 23, Pl. 1, Fig. 6.
1850a. *Pinites rigios* Unger, p. 362.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Pinus salinarum* (Partsch) Zablocki**

1928. Zablocki, p. 184, Pl. 7, Figs 1-4.
1991. Palamarev & al., p. 3, Pl. 1, Fig. 2.
1998a. Bozukov, p. 8.
1847. *Pinites salinarum* Partsch in Endlicher, p. 288.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Pinus taedaeformis* (Unger) Heer**

1859. Heer, p. 160, Pl. 146, Fig. 10.
1963b. Palamarev, p. 70, Pl. 1, Fig. 2.
1852. *Pinites taedaeformis* Unger, p. 52, Pl. 13, Fig. 4.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Pinus thomasiana* (Göpp.) Rchb.**

1919. Reichenbach in Kräusel, p. 115, Pl. 10, Figs 29-30.
1987. Palamarev & Petkova, p. 24, Pl. 4, Fig. 6.
1845. *Pinites thomasiana* Göpp. in Göppert & Berendt, p. 92, pars Pl. 3, Figs 17-21 (non Figs 12-16 = *Pinus* sp.)
Material: Ca.
Location and stratigraphical range: Vidin (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Pinus ungeri* Stur**

1867. Stur, p. 149.

1991. Palamarev & al., p. 3; Pl. 1, Figs 7-8.
1998a. Bozukov, p. 8.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Pinus sp. aff. *P. excelsa* Wall.

1929. Stojanoff & Stefanoff, p. 12, Figs 1-6; Pl. 1, Figs 7-11; Fig.-text 2.
1934. Stefanov & Jordanov, p. 4, Pl. 3, Fig. 2; Pl. 4, Figs 4-5.
1972. Kitanov, p. 170, Pl. 2, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Pinus sp. aff. *P. halepensis* Mill.

1929. Stojanoff & Stefanoff, p. 18, Fig. 7; Pl. 3, Fig. 1; Fig.-text 4.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Pinus sp. aff. *P. montana* Mill.

1972. Kitanov, p. 173, Pl. 3, Fig. 1.
Material: Ca.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Pinus sp. aff. *P. radiata* Don

1935. Stefanov & Jordanov, p. 18, Pl. 3, Figs 6-7; Fig.-text 15.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Pinus sp. sect. *Strobus*

1929. Stojanoff & Stefanoff, p. 22, Fig. 3; Pl. 3, Figs 5-8; Fig.-text 4.
Rev. 1984. *Pinus peuce* Griseb. foss.; Kitanov, p. 47, Figs 4.3-4.

Pinus sp.

1995. Palamarev & Staneva, p. 116.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

PODOCARPUS L'Hér. ex Pers. – PODOCARPACEAE

"Podocarpus" eocenica Unger

1850b. Unger, p. 28, Pl. 2, Figs 11-16.
1963b. Palamarev, p. 70, Pl. 1, Fig. 3.
1991. Palamarev & Petkova, p. 29, Pl. 1, Fig. 3.
Material: Li.
Location and stratigraphical range: Oustovo-Strazha (Smolyan Formation, Upper Eocene – Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Podocarpaceae* is questionable.

PSEUDOTSUGA Carrière – PINACEAE

Pseudotsuga sp. aff. *P. douglasii* Carrière

1930. Stefanov, p. 105, Fig. 2.
1934. Stefanov & Jordanov, p. 2, Pl. 3, Fig. 1; Pl. 4, Figs 1-2.
1935. Stefanov & Jordanov, p. 11, Pl. 1, Fig. 14; Fig.-text 6.
1984. Kitanov, p. 45, Fig. 4.2.
Material: Ca.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

SCIADOPITYS Siebold & Zucc. – TAXODIACEAE

Sciadopitys cf. *marcodurensis* Weyland, Kilpper & Berendt

1991. Palamarev & al., p. 5, Pl. 4, Fig. 9.
1998a. Bozukov, p. 8.
1967. *S. marcodurensis* Weyland, Kilpper & Berendt, p. 159, Pl. 30, Figs 31-35; Pl. 31, Figs 36-38.
Material: Li.

Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

SEQUOIA Endl. – TAXODIACEAE

***Sequoia abietina* (Brongn.) Knobloch**

1964. Knobloch, p. 601.
1967. Palamarev, p. 92.
1984. Kitanov, p. 49, Fig.-text 6.2.
1991. Palamarev & Petkova, p. 27; Pl. 4, Figs 2-3; Pl. 6, Figs 1-3.
1991. Palamarev & al., p. 4, Pl. 1, Figs 9-11.
1998a. Bozukov, p. 8.
1998. Palamarev & al., pp. 14-15.
1932. *S. langsdorfii* (Brongn.) Heer; Konjarov, p. 54, Pl. 15, Figs 1-2; p. 98, Pl. 25, Figs 1-2; p. 125, Pl. 31, Fig. 1; p. 129, Pl. 38, Fig. 7.
1937. Konstantinov, p. 259, Pl. 1, Fig. 5.
1961. Palamarev, p. 177, Pl. 1, Fig. 3.
1962. Kitanov & Palamarev, p. 5.
1964a. Palamarev, p. 12, Pl. 3, Figs 1-2.
1935. *S. langsdorfii* aff. *S. sempervirens* Endl.; Stefanov & Jordanov, p. 11, text-Fig. 5; Pl. 1, Figs 5-9.
1822. *Phyllites abietina* Brongn. in Cuvier, p. 617, Pl. 2, Fig. 13.
Material: Ca, Li, Cu.
Location and stratigraphical range: Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Sequoia langsdorfii (Brongn.) Heer

1932. Konjarov, p. 54, Pl. 15, Figs 1-2; p. 98, Pl. 25, Figs 1-2; p. 125, Pl. 31, Fig. 1; p. 129, Pl. 38, Fig. 7; p. 228, Fig. 69, Fig. 4.
1935. Stefanov & Jordanov, p. 11, Pl. 1, Figs 5-9; Fig.-text 5.
1937. Konstantinov, p. 259, Pl. 1, Fig. 5.
1961. Palamarev, p. 177, Pl. 1, Fig. 3.
1962. Kitanov & Palamarev, p. 5.
1964a. Palamarev, p. 12, Pl. 3, Figs 1-2.
Rev. 1984. *Sequoia abietina* (Brongn.) Knobloch; Kitanov, p. 49, Fig.-text 6.2.

***Sequoia lithuanica* Dorof.**

1975. Dorofeev, p. 114, Pl. 12, Figs 12-14.
1994a. Palamarev, p. 133, Pl. 1, Fig. 8.
Material: Ca.
Location and stratigraphical range: Sofia basin – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Sequoia rossica* Dorof.**

1975. Dorofeev, p. 114, Pl. 12, Figs 8-11.
1994a. Palamarev, p. 135, Pl. 1, Figs 3-4, 6.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

SEQUOIADENDRON Buchholz – TAXODIACEAE

***Sequoiadendron breviauriculatum* Palam.**

1994b. Palamarev, p. 23, Pl. 1, Figs 1-2.
Holotypus: Pl. 1, Fig. 1, Palamarev (1994b).
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Sequoiadendron* sp. aff. *S. giganteum* (Lindl.) Buchholz**

1984. Kitanov, p. 49, Fig.-text 6.1.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

TAIWANIA Hayata – TAXODIACEAE

***Taiwania palaeoflousiana* Rajushkina**

1967. Rajushkina, p. 51, Fig.-text 1.
1978. Palamarev & al., p. 4, Pl. 1, Figs 1-2, 4; Figs-text 1-2.
1987. Palamarev & Petkova, p. 27, Pl. 6, Figs 1a-b, 2-9.

Material: Cu, Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

TAXODIUM Rich. – TAXODIACEAE

Taxodium sp. aff. *T. distichum* (L.) Rich.

1972. Kitanov, p. 174, Pl. 3, Fig. 2.
Rev. *Taxodium dubium* (Sternb.) Heer; Palamarev, hoc loco.

Taxodium distichum (L.) Rich. *miocenicum* Heer

1932. Konjarov, p. 54, Pl. 14, Figs 4-5.
1956. Hadžiev, p. 130, Pl. 1, Figs 1-4; Pl. 2; Figs 1-4; Pl. 3, Figs 1-4; Pl. 4, Figs 1-4; Pl. 5, Figs 1-4.
Rev. *Taxodium dubium* (Sternb.) Heer; Bozukov, hoc loco.

***Taxodium dubium* (Sternb.) Heer**

1855. Heer, p. 49, Pl. 17, Figs 5-15.
1961. Palamarev, p. 177, Pl. 1, Fig. 1.
1964a. Palamarev, p. 12, Pl. 3, Fig. 5.
1998. Palamarev & al., p. 15.
1932. *T. distihum* (L.) Rich. *miocenicum* Heer; Konjarov, p. 54, Pl. 14, Figs 4-5.
1956. Hadžiev, p. 130, Pl. 1, Figs 1-4; Pl. 2; Figs 1-4; Pl. 3, Figs 1-4; Pl. 4, Figs 1-4; Pl. 5, Figs 1-4.
1833. *Phyllites dubius* Sternb.; Sternberg, p. 37, Pl. 36, Figs 3-4.
Material: Li, Wood.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

TAXUS L. – TAXACEAE

***Taxus baccata* L. foss.**

1929. Stojanoff & Stefanoff, p. 10, Fig. 10; Pl. 1, Fig. 6; Fig.-text 2.
1935. Stefanov & Jordanov, p. 8, Pl. 1, Figs 1-2; Fig.-text 3.
1956. Kitanov & Nikolova, p. 86.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

TETRACLINIS Mast. – CUPRESSACEAE

***Tetraclinis brachyodon* (Brongn.) Mai & H. Walther**

1985. Mai & Walther, p. 30, Pl. 3, Figs 17-19.
1991. Palamarev & Petkova, p. 28, Pl. 5, Figs 7-10.
1999a. Palamarev & al., p. 29, Pl. 1, Figs 2-4
1935. *Tetraclinis* sp. aff. *T. articulata* (Vahl) Mast.; Stefanov & Jordanov, p. 21, Fig.-text 18.
1966. *T. brongniartii* (Endl.) Grambast; Palamarev & Petkova, p. 53, Pl. 3, Figs 1-2; Fig.-text 2.
1822. *Equisetum brachyodon* Brongn.; Brongniart, p. 328, Pl. 16, Fig. 3.
Material: Li.
Location and stratigraphical range: Angel Voivoda (Continental formation, Upper Eocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Selcha (Devin Formation, Lower Oligocene); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Tetraclinis brongniartii (Endl.) Grambast

1966. Palamarev & Petkova, p. 53, Pl. 3, Figs 1-2; Fig.-text 2.
Rev. 1991. *Tetraclinis brachyodon* (Brongn.) Mai & H. Walther; Palamarev & Petkova, p. 28, Pl. 5, Figs 7, 10.

Tetraclinis sp. aff. *T. articulata* (Vahl) Mast.

1935. Stefanov & Jordanov, p. 21, Fig.-text 18.
Rev. 1991. *Tetraclinis brachyodon* (Brongn.) Mai & H. Walther; Palamarev & Petkova, p. 28, Pl. 5, Figs 7, 10.

***Tetraclinis wandae* Zablocki**

1928. Zablocki, p. 188, Pl. 8, Figs 10-14.
1991. Palamarev & al., p. 6, Pl. 4, Figs 4-5.
1998a. Bozukov, p. 9.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

THUJA L. – CUPRESSACEAE

***Thuja occidentalis* L. foss.**

1929. Stojanoff & Stefanoff, p. 24, Fig. 1; Pl. 3, Fig. 5; Fig.-text 5.
1984. Kitanov, p. 51, Fig. 8.6.
1934. *Thuja* sp. aff. *T. occidentalis* L. (*T. occidentalis thuringiaca* Schloth.); Stefanov & Jordanov, p. 6, Pl. 3, Fig. 4; Pl. 4, Figs 12-14.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: BI (BAS).

***Thuja saviana* Gaudin**

1859. Gaudin in Gaudin & Strozzi, p. 12, Pl. 1, Figs 4-19; Pl. 2, Figs 6-7.
1991. Palamarev & al., p. 6, Pl. 4, Figs 1-2.
1998a. Bozukov, p. 9.
Material: Cu, Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: BI (BAS), Dep. Palaeobot. and Palynol.

TSUGA Carrière – PINACEAE

***Tsuga europaea* Menzel**

1913. Menzel, p. 22.
1935. Stefanov & Jordanov, p. 12, Pl. 1, Figs 10-13; Fig.-text 7.
1940. Kitanov, p. 5, Pl. 1, Fig. 1.
1984. Kitanov, p. 45, Fig. 4.1.
01934. Stefanov & Jordanov, p. 3, Pl. 4, Fig. 3.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Tsuga moenana* Kirchh.**

1935. Kirchheimer, p. 433, Pl. 5, Fig. 1.
1991. Palamarev & al., p. 4, Pl. 1, Fig. 1.
1998a. Bozukov, p. 8.
Material: Ca.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

IX. Divisio MAGNOLIOPHYTA

1. Class MAGNOLIOPSIDA

ACACIA Mill. – FABACEAE

***Acacia dianae* Ettingsh.**

1853. Ettingshausen, p. 94, Pl. 30, Figs 58-59.
1963b. Palamarev, p. 82, Pl. 3, Fig. 36.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Acacia parschlugiana* Unger**

1850a. Unger, p. 494.
1999a. Palamarev & al., p. 37, Pl. 2, Fig. 7.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

***Acacia sotzkiana* Unger**

1850b. Unger, p. 189, Pl. 46, Figs 1-10
1999b. Palamarev & al., p. 17, Pl. 6, Fig. 4.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

ACER L. – ACERACEAE

***Acer aegopodifolium* (Göpp.) Baikovskaja**

1965. Baikovskaja in Shvareva, p. 953.
1992. Palamarev & Bozukov, p. 63.
1855. *Rhus aegopodifolium* Göpp.; Göppert, p. 37, Pl. 25, Fig. 10.
1855. *R. quercifolia* Göpp; Göppert, p. 37, Pl. 25, Figs 6-9.
1932. Konjarov, p. 125, Pl. 37, Figs 1-2.

1967. *Monopleurophyllum quercifolia* (Göpp.) Kotl.; Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Oranovo-Simitli (Simitli Formation, Maeotian).
Collection: IB (BAS).

Acer angustilobum Heer

1963a. Palamarev, p. 212, Fig.-text 11.
Rev. *A. dasycarpoides* Heer f. *angustilobum* (Heer) Proch. & Bůžek; Palamarev, hoc loco.

Acer campestre L. foss.

1935. Stefanov & Jordanov, p. 66, Fig.-text 66.
1960. Kitanov, p. 373, Pl. 7, Fig. 1.
1977. Palamarev & Kitanov, p. 7, Pl. 3, Figs 1-3; Pl. 4, Fig. 2.
1982. Kitanov, p. 37, Pl. 4, Fig. 1.
Rev. *Acer subcampestre* Göpp.; Palamarev, hoc loco.

***Acer dasycarpoides* Heer f. *angustilobum* (Heer) Proch. & Bůžek**

1975. Prochazka & Bůžek, p. 37, Pl. 21, Figs 6-10; Figs-text 4a-c.
1859. *A. angustilobum* Heer, p. 57, Pl. 118, Figs 4-5, 7.
1937. Konstantinov, Pl. 6, Figs 3, 7, 9-11 sub sp. indet., det. by Palamarev & Kitanov in Palamarev & al. 1998, p. 14, Pl. 1.
1963a. Palamarev, p. 212, Fig.-text 11.
1859. *A. grossedentatum* Heer, p. 57, Pl. 112, Fig. 24.
1859. *A. rueminianum* Heer, p. 57, Pl. 118, Figs 11-13.
1977. *A. heldreichii* Orph. foss.; Palamarev & Kitanov, p. 10, Pl. 4, Fig. 3.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Acer engelhardtii* H. Walther**

1972. Walther, p. 35, Pl. 6, Figs 6-11; Pl. 37, Figs 1-8.
1992. Palamarev & Bozukov, p. 62.
1999b. Bozukov, p. 56, Pl. 4, Fig. 3.
1964a. *Acer* sp.; Palamarev, p. 27, Fig.-text 34, det. Palamarev, hoc loco.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Acer heldreichii Orph. foss.

1977. Palamarev & Kitanov, p. 10, Pl. 4, Fig. 3.
Rev. *Acer dasycarpoides* Heer f. *angustilobum* (Heer) Proch. & Bůžek; Palamarev, hoc loco.

Acer hyrcanum Fisch. & C.A. Mey.

1929. Stojanoff & Stefanoff, p. 82, Pl. 12, Figs 1-2, Fig.-text 22.
Rev. *Acer pseudomonspessulanum* Unger s.l.; Palamarev, hoc loco.

***Acer integerrimum* (Viv.) A. Massal.**

1858. Massalongo, p. 94.
1977. *A. integerrimum* var. *integerrimim*; Palamarev & Kitanov, p. 4, Pl. 2, Fig. 4.
1977. *A. integerrimum* var. *integrilobum* (C.O. Weber) Palam. & Kitanov; Palamarev & Kitanov, p. 7, Pl. 1, Figs 1-6; Pl. 2, Figs 1-3.
1992. Palamarev & Bozukov, p. 62.
1999b. Bozukov, p. 56, Pl. 6, Fig. 1.
1852. *A. integrilobum* C.O. Weber, p. 196, Pl. 22, Figs 5a-b.
1964a. Palamarev, p. 27, Pl. 11, Fig. 4; Fig.-text 33.
1833. *Acerites integerrima* Viv.; Viviani, p. 131, Pl. 11, Fig. 6.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Acer integrilobum C.O. Weber

1964a. Palamarev, p. 27, Pl. 11, Fig. 4; Fig.-text 33.
Rev. 1977. *Acer integerrimum* (Viv.) A. Massal. var. *integrilobum* (C.O. Weber) Palamarev & Kitanov, p. 4, Pl. 1, Figs 1-6; Pl. 2, Figs 1-3.

Acer integrilobum auct. non C.O. Weber

1932. Konjarov, p. 129, Pl. 43, Fig. 6.
Rev. *Acer pseudomonspessulanum* Unger s.l., Palamarev, hoc loco.

Acer loclense (A. Braun) Hantke

1966. Palamarev & Petkova, p. 63, Pl. 6, Figs 3-4; Fig.-text 11.
Rev. *Acer pseudomonspessulanum* Unger s.l.; Palamarev, hoc loco.

***Acer monoides* Shap.**

1956. Shaparenko in Takhtajan, p. 134, Pl. 51, Figs 1-3; Fig.-text 62-64.
1963b. Palamarev, p. 80, Pl. 2, Fig. 29.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Acer monspessulanum L. var. *ibericum* auct. non Koch

1935. Stefanov & Jordanov, p. 65, Pl. 22, Figs 1-8; Fig.-text 65.
Rev. *Acer pseudomonspessulanum* Unger s.l.; Palamarev, hoc loco.

Acer ex. gr. *nordenskiöldii* Nath.

1964b. Palamarev, p. 135, Pl. 1, Fig. 8; Pl. 10, Fig. 1.
Rev. 1992. *Acer vindobonense* (Ettingsh.) Stur; Palamarev & Bozukov, p. 64.

***Acer palaeosaccharinum* Stur**

1867. Stur, p. 177, Pl. 5, Fig. 8.
1963a. Palamarev, p. 79, Pl. 2, Fig. 28.
1967. Palamarev, p. 95.
1977. Palamarev & Kitanov, p. 15, Pl. 9, Figs 2, 5.
1992. Palamarev & Bozukov, p. 63, Pl. 4, Figs 1, 3-4.
1996. Uzunova, p. 31, Pl. 4, Figs 2-3.
1999b. Bozukov, p. 57.
1932. *A. trilobatum* A. Braun; Konjarov, p. 125, Pl. 35, Fig. 5.
1932. *Acer* aff. *subplatanoides* Engelh.; Konjarov, p. 125, Pl. 35, Figs 1-2.
Material: Cu, Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Acer protohyrcanum* Palam. & Bozukov** (Plate III, Fig. 6).

1992. Palamarev & Bozukov, p. 68, Pl. 1, Fig. 1; Pl. 2, Fig. 1.
1999b. Bozukov, p. 57.
Holotypus: Pl. 1, Fig. 1, (N Sat-2400a), Palamarev & Bozukov (1992).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Acer pseudomonspessulanum* Unger s.l.**

1847. Unger, p. 132, Pl. 43, Figs 1-2.
1977. Palamarev & Kitanov, p. 11, Pl. 3, Fig. 4; Pl. 4, Fig. 1; Pl. 6, Fig. 3.
1988. Palamarev & Kitanov, p. 196, Pl. 11, Fig. 4.
1929. *A. hyrcanum* Fisch. & C.A. Mey.; Stojanoff & Stefanoff, p. 82, Pl. 12, Figs 1-2, Fig.-text 22.
1932. *A. integrilobum* auct. non C.O. Weber; Konjarov, p. 129, Pl. 43, Fig. 6.
1935. *A. monspessulanum* L. var. *ibericum* auct. non Koch; Stefanov & Jordanov, p. 65, Pl. 22, Figs 1-8; Fig.-text 65.
1966. *A. loclense* (A. Braun) Hantke; Palamarev & Petkova, p. 63, Pl. 6, Figs 3-4; Fig.-text 11.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Upper Oligocene); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Acer pseudoplatanus* L. foss.**

1934. Stefanov & Jordanov, p. 27, Pl. 1, Fig. 5.
1935. Stefanov & Jordanov, p. 62, Pl. 21, Figs 5-8; Figs-text 61-62.
1960. Kitanov, p. 373, Pl. 6, Fig. 1.
1977. Palamarev & Kitanov, p. 10, Pl. 5, Fig. 1.
1992. Palamarev & Bozukov, p. 62, Pl. 2, Fig. 3; Pl. 3, Fig. 5.
1999b. Bozukov, p. 57.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian), Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Acer subcampestre* Göpp.**

1855. Göppert, p. 34, Pl. 22, Figs 16-17.
1992. Palamarev & Bozukov, p. 62, Pl. 1, Fig. 3.
1999b. Bozukov, p. 58.
1935. *A. campestre* L. foss.; Stefanov & Jordanov, p. 66, Fig.-text 66.
1960. Kitanov, p. 373, Pl. 7, Fig. 1.
1977. Palamarev & Kitanov, p. 7, Pl. 3, Figs 1-3; Pl. 4, Fig. 2.
1982. Kitanov, p. 37, Pl. 4, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).).
Collection: IB (BAS).

Acer aff. *subplatanoides* Engelh.

1932. Konjarov, p. 125, Pl. 35, Figs 1-2.
Rev. *Acer palaeosaccharinum* Stur; Palamarev, hoc loco.

***Acer tataricum* L. foss.**

1935. Stefanov & Jordanov, p. 62, Pl. 21, Figs 3-4.
1940. Kitanov, p. 19, Pl. 5, Fig. 4.
1977. Palamarev & Kitanov, p. 17, Fig.-text 1.
1982. Kitanov, p. 37.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian), Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Acer tricuspidatum* A. Braun & Agassiz**

1838. Braun & Agassiz in Bronn, p. 865, Pl. 35, Figs 10a-b.
1937. Konstantinov, sub sp. indet., Pl. 6, Figs 2, 4-6, det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14, Pl. 1.
1977. Palamarev & Kitanov, p. 13, Pl. 6, Figs 1-2, 4; Pl. 7, Figs 1-4; Pl. 8, Fig. 1; Pl. 9, Figs 1, 3-4.
1982. Kitanov, p. 37, Pl. 6, Fig. 2.
1987. Palamarev & Petkova, p. 123, Pl. 31, Figs 3-4.
1988. Černjavska & al., p. 31.
1988. Palamarev & Kitanov, p. 115, Pl. 10, Figs 3, 5.
1992. Palamarev & Bozukov, p. 64, Pl. 1, Fig. 2.
1996. Uzunova, p. 31, Pl. 5, Figs 1-2.
1999b. Bozukov, p. 58.
1932. *A. trilobatum* A. Braun; Konjarov, p. 54, Pl. 23, Figs 4-5; p. 98, Pl. 30, Figs 1-3, 6; p. 125, Pl. 36, Fig. 1; p. 129, Pl. 43, Fig. 7; p. 171, Pl. 58, Fig. 1; p. 222, Pl. 65, Figs 1-2.
1961. Palamarev, p. 185.
1964a. Palamarev, p. 27.
Note: Very polymorphologic species including the forms: f. *tricuspidatum*, f. *crenatifolium* (Ettingsh.) Proch. & Bůžek, f. *brachiphyllum* (Heer) Proch. & Bůžek, f. *productum* (A. Braun) Proch. & Bůžek, f. *bruckmanii* (A. Braun) Proch. & Bůžek. Three forms are established in the Bulgarian fossil flora: f. *tricuspidatum*, f. *brachyphyllum*, f. *productum* (Bozukov 1999b).
Material: Cu, Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Karbintsi, Lepitsa, Pelovo, Rouzhintsi, Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian); West Maritsa basin – Merichleri (Upper Maritsa Formation, Maeotian); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Acer trilobatum A. Braun

1932. Konjarov, p. 125, Pl. 35, Fig. 5.
Rev. *Acer palaeosaccharinum* Stur; Palamarev, hoc loco.

1932. Konjarov, p. 54, Pl. 23, Figs 4-5; p. 98, Pl. 30, Figs 1-3, 6; p. 125, Pl. 36, Fig. 1; p. 129, Pl. 43, Fig. 7; p. 171, Pl. 58, Fig. 1; p. 222, Pl. 65, Figs 1-2.
1961. Palamarev, p. 185.
1964a. Palamarev, p. 27.
Rev. *Acer tricuspidatum* A. Braun & Agassiz; Palamarev, hoc loco.

***Acer vindobonense* (Ettingsh.) Stur**

1867. Stur, p. 173.
1851. *Sterculia vindobonensis* Ettingsh.; Ettingshausen, p. 20, Pl. 4, Fig. 2.
1964b. *Acer* ex. gr. *nordenskiöldii* Nath.; Palamarev, p. 135, Pl. 1, Fig. 8; Pl. 10, Fig. 1.

Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

ACHRAS L. – SAPOTACEAE

***Achras* aff. *sapota* L.**

1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko argillaceous sandstone Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

ACTINIDIA Lindl. – ACTINIDIACEAE

***Actinidia faveolata* C. & E. Reid**

1915. Reid & Reid, p. 117, Pl. 13, Figs 1-4.
1970. Palamarev, p. 44, Pl. 1, Fig. 21; Pl. 1, Fig. 1.
1982. Palamarev, p. 17, Pl. 5, Fig. 10.
Material: Ca.
Location and stratigraphical range: Razlog (Razlog coalbearing formation, Lower Pontian – Lower Dacian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

***Actinidia* cf. *superba* Negru**

1986. Negru, p. 93, Pl. 16, Figs 3-13.
1994a. Palamarev, p. 28, Pl. 4, Figs 5-6.
1994b. Palamarev, p. 139, Pl. 1, Fig. 7.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene); Sofia basin – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Pontian) – Balsha (Gnilyane Formation, Lower Pontian);
Collection: IB (BAS).

ADINANDRA Jack – THEACEAE

***Adinandra palaeorhodopaea* Palam. & Bozukov** (Plate I, Fig. 7).

1995. Palamarev & Bozukov in Bozukov & Palamarev, p. 173, Fig. 3.
1999b. Bozukov, p. 48.
Holotypus: Fig. 3, (N Sat-442), Bozukov & Palamarev (1995).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

AILANTHUS Desf. – SIMAROUBACEAE

***Ailanthus confucii* Unger**

1850b. Unger, p. 28.
1963b. Palamarev, p. 83, Pl. 3, Fig. 38.
1967. Palamarev, p. 93.
1999b. Palamarev & al., p. 18, Pl. 8, Fig. 8.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

ALDROVANDA L. – DROSERACEAE

***Aldrovanda ovata* (Chandler) E. Reid & Chandler**

1926. Reid & Chandler, p. 113, Pl. 6, Figs 24-26.
1973. Palamarev, p. 86, Pl. 3, Figs 5-6.
1925. *Nuphar ovatum* Chandler, p. 22, Pl. 3, Figs 3a-b.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Aldrovanda praevesiculosa* Kirchh.**

1957. Kirchheimer, p. 402, Pl. 82.
1970. Palamarev, p. 48, Pl. 3, Figs 5-7.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian – Lower Dacian); Sofia basin – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Pontian).
Collection: IB (BAS).

ALNUS B. Ehrh. – BETULACEAE

***Alnus crebrinervis* Kovács**

1957. Kovács, p. 436, Pl. 22, Fig. 5.

1992. Bozukov & Palamarev, p. 14, Pl. 10, Fig. 4; Pl. 11, Fig. 1.
1999a. Bozukov, p. 7.
1951. *A. incana* (L.) Moench; Stefanov & Ganchev, p. 164, Fig. 12.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Alnus dimitrovii Jordanov & Kitan.

1950. Jordanov & Kitanov, p. 7, Figs 1-3.
Rev. 1981. *Alnus ducalis* (Gaudin) Knobloch; Kitanov & Kitanov, p. 73, Figs 1.1-8.

***Alnus ducalis* (Gaudin) Knobloch**

1969. Knobloch, p. 69, Pl. 28, Figs 1-3; Pl. 29, Figs 1-5; Pl. 31, Figs 1-2; Pl. 32, Fig. 5; Pl. 33, Figs 4-5; Pl. 34, Figs 1-2; Pl. 35, Fig. 5; Pl. 53, Fig. 9; Pl. 75, Fig. 4; Figs-text 159-166.
1981. Kitanov & Kitanov, p. 73, Pl. 1, Figs 1-8.
1992. Bozukov & Palamarev, p. 15, Pl. 11, Figs 2, 4-6.
1999a. Bozukov, p. 7.
1929. *A. stenophylla* Saporta & Marion; Stojanoff & Stefanoff, p. 42, Fig. 5; Pl. 5, Figs 6-7; Fig.-text 11.
1934. *A. subcordata* C.A. Mey.; Stefanov & Jordanov, p. 13, Pl. 5, Figs 3-4.
1935. Stefanov & Jordanov, p. 33, Pl. 7, Fig. 11; Pl. 8, Figs 4-5.
1950. *A. dimitrovii* Jordanov & Kitan.; Jordanov & Kitanov, p. 7, Figs 1-3.
1858. *Rhamnus ducalis* Gaudin in Gaudin & Strozzi, p. 39, Pl. 9, Figs 6-9.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Alnus gaudinii* (Heer) Knobloch & Kvaček**

1976. Knobloch & Kvaček, p. 33, Pl. 6, Figs 1, 3; Pl. 7, Figs 1, 5; Pl. 13, Fig. 4; Pl. 15, Figs 1-4, 7-8, 11, 13, 15, 17; Pl. 16, Figs 1-5; Pl. 19, Fig. 15; Pl. 20, Fig. 10; Figs-text 11-12.
1987. Palamarev & Petkova, p. 74, Pl. 21, Fig. 2.
1998. Palamarev & al., p. 14.
1859. *Rhamnus gaudinii* Heer, p. 79, Pl. 124, Figs 4-15; Pl. 125, Figs 1, 7, 13.
1932. Konjarov, p. 98, pars Pl. 29, Figs 4-5; p. 173, Pl. 59, Fig. 3 (non Pl. 23, Fig. 6; Pl. 29, Fig. 3 = sp. indet.)
1961. Palamarev, p. 186, Pl. 7, Fig. 3.
1964a. Palamarev, p. 28.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Alnus glutinosa* Gaertn.**

1929. Stojanoff & Stefanoff, p. 42, Figs 1, 3; Pl. 5, Figs 4-5; Fig.-text 10.
1934. Stefanov & Jordanov, p. 14, Pl. 3, Fig. 8; Pl. 5, Fig. 6.
1935. Stefanov & Jordanov, p. 35, Fig. 34; Pl. 8, Fig. 4; Pl. 9, Fig. 1.
1956. Kitanov & Nikolova, p. 94, Pl. 2, Fig. 4.
Material: Ca, Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Alnus incana* (L.) Moench**

1934. Stefanov & Jordanov, p. 15, Pl. 3, Fig. 9.
1935. Stefanov & Jordanov, p. 36, Fig. 35.
Material: Ca, Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Alnus incana (L.) Moench

1951. Stefanov & Ganchev, p. 164, Fig. 1.
Rev. 1992. *Alnus crebrinervis* Kovács; Bozukov & Palamarev, p. 14, Pl. 10, Fig. 4; Pl. 11, Fig. 1.

Alnus incana (L.) Moench foss.

1984. Kitanov, p. 58, Fig. 9.5.
Rev. 1992. *Alnus* aff. *subcordata* C.A. Mey.; Bozukov & Palamarev, p. 16, Pl. 10, Figs 1-3.

***Alnus julianaeformis* (Sternb.) Kvaček & Holý**

1974. Kvaček & Holý, p. 368, Pl. 1, Figs 1-7; Pl. 2, Figs 1-7; Pl. 3, Figs 1-6; Pl. 4, Figs 1-4; Fig.-text 1.
1987. Palamarev & Petkova, p. 73, Pl. 21, Fig. 1.
1823. *Phyllites julianaeformis* Sternb.; Sternberg, p. 37, Pl. 36, Fig. 2.
1932. *Fagus feroniae* Unger; Konjarov, p. 126, Pl. 32, Fig. 1.
Material: Li.
Location and stratigraphical range: Karbintsi, Rouzhintsi (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formation, Maeotian).
Collection: IB (BAS).

***Alnus kefersteinii* (Göpp.) Unger s. str.**

1847. Unger, p. 115 p. p. quad strobili, Pl. 33, Figs 1-2.
1932. Konjarov, p. 54, Pl. 19, Fig. 5; p. 125, Pl. 31, Figs 2-5; p. 129, Pl. 39, Figs 8-9.
1961. Palamarev, p. 180, Pl. 3, Fig. 1.
1964a. Palamarev, p. 15.
1981. Kitanov & Kitanov, p. 73, Pl. 1, Figs 5-8.
1988. Palamarev & Kitanov, p. 192, Pl. 8, Fig. 4.
1998. Palamarev & al., p. 15.
1950. *A. dimitrovii* Jordanov & Kitan.; Jordanov & Kitanov, p. p. quad strobili, p. 9, Figs 3b-v.
1836. *Alnites kefersteinii* Göpp; Göppert, p. 565, Pl. 41, Figs 15-18.
Material: Ca.
Location and stratigraphical range: Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Oranovo-Simitli (Simitli Formation, Maeotian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian);
Collection: IB (BAS).

***Alnus nostratum* Unger**

1847. Unger, p. 117, Pl. 34, Fig. 1.
1932. Konjarov, p. 244, pars Pl. 74, Fig. 2.
1961. Palamarev, p. 180, Fig. 8.
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Upper Oligocene); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

***Alnus palaeorhodopaea* Bozukov & Palam.** (Plate II, Fig. 1).

1992. Bozukov & Palamarev, p. 15, Pl. 12, Figs 1-4.
1999a. Bozukov, p. 7.
Holotypus: Pl. 12, Fig. 1, (N Sat-1105), Bozukov & Palamarev (1992).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Alnus rostaniana* Saporta**

1891. Saporta, p. 50, Pl. 14, Figs 1-2.
1998. Palamarev & al., p. 15.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

Alnus stenophylla Saporta & Marion

1929. Stojanoff & Stefanoff, p. 42, Fig. 5; Pl. 5, Figs 6-7; Fig.-text 11.
Rev. 1981. *Alnus ducalis* (Gaudin) Knobloch; Kitanov & Kitanov, p. 73, Pl. 1, Figs 1-8.

Alnus subcordata C.A. Mey.

1934. Stefanov & Jordanov, p. 13, Pl. 4, Figs 4-5.
1935. Stefanov & Jordanov, p. 33, Pl. 7, Fig. 11; Pl. 8, Figs 4-5.
Rev. 1981. *Alnus ducalis* (Gaudin) Knobloch; Kitanov & Kitanov, p. 73, Pl. 1, Figs 1-8.

Alnus subcordata C.A. Mey. foss.

1988. Palamarev & Kitanov, p. 192, Pl. 8, Fig. 5.
Rev. 1992. *Alnus* aff. *subcordata* C.A. Mey.; Bozukov & Palamarev, p. 16, Pl. 10, Figs 1-3.

***Alnus* aff. *subcordata* C.A. Mey.**

1992. Bozukov & Palamarev, p. 16, Pl. 10, Figs 1-3.
1999a. Bozukov, p. 8.
1984. *A. incana* (L.) Moench foss.; Kitanov, p. 58, Fig. 9.5.
1988. *A. subcordata* C.A. Mey. foss.; Palamarev & Kitanov, p. 192, Pl. 8, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Alnus suborientalis* Czeczott & Skirg.**

1959. Czeczott & Skirgiello, p. 103, Pl. 2, Figs 1-4; Pl. 3, Figs 1-4; Pl. 4, Figs 1-8; Fig.-text 1.
1987. Palamarev & Petkova, p. 75, Pl. 21, Fig. 4.
1932. *A. nostratum* Unger; Konjarov, p. 55, pars Pl. 19, Fig. 6.
Material: Li.
Location and stratigraphical range: Pernik (Coalbearing formation, Upper Oligocene); Rouzhintsi (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

AMPELOPSIS **Michx. – VITACEAE**

***Ampelopsis* aff. *cordata* Michx.**

2000. Bozukov, p. 25, Pl. 4, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Ampelopsis hibschii* Bůžek, Kvaček & H. Walther**

1981. Bůžek & al., p. 127, Pl. 1-6; Figs-text 1-7.
2000. Bozukov, p. 25, Pl. 2, Fig. 2; Pl. 3, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Ampelopsis ludwigii (A. Braun) Dorof.

1982. Palamarev, p. 22, Pl. 7, Figs 4-5.
Rev. 1994a. *Ampelopsis malvaeformis* (Schloth.) Mai; Palamarev, p. 144, Pl. 3, Figs 10-12.

***Ampelopsis malvaeformis* (Schloth.) Mai**

1982. Mai in Mai & Gregor, p. 418, Pl. 21, Figs 1-3.
1994a. Palamarev, p. 144, Pl. 3, Figs 10-12.
1982. *A. ludwigii* (A. Braun) Dorof.; Palamarev, p. 22, Pl. 7, Figs 4-5.
1822. *Carpolithes malvaeformis* Schloth.; Schlotheim, p. 98, Pl. 21, Figs 9a-c.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Upper Pontian; Novi Iskur Formation, Upper Pontian).
Collection: IB (BAS).

***Ampelopsis* aff. *orientalis* (Lam.) Planch.**

2000. Bozukov, p. 26, Pl. 2, Fig. 1; Pl. 3, Fig. 5
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Ampelopsis rotundata* Chandler**

1926. Chandler, p. 33, Pl. 5, Figs 5a-c.
1971. Palamarev, p. 159, Pl. 22, Figs 15-16; Pl. 23, Figs 3, 5.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

AMYGDALUS (L.) Benth. & Hook. – ROSACEAE

Amygdalus pereger Unger

1850b. Unger, p. 54, Pl. 34, Figs 10-14.
1963b. Palamarev, p. 82, Pl. 3, Fig. 35.
Rev. *Pruniphyllum peregrum* (Unger) Weyland; Palamarev (1967).

ANAGYRIS **L. – FABACEAE**

***Anagyris foetida* L. foss.**

1987. Palamarev & Petkova, p. 112, Pl. 29, Fig. 5.
1999b. Bozukov, p. 54, Pl. 4, Fig. 1.
1964a. *Vaccinium acheronticum* Unger; Palamarev, p. 31, Fig.-text 46.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Ruzhinci (Krivodol Formation, Volhynian).
Collection: IB (BAS).

ANDROMEDA **L. – ERICACEAE**

Andromeda protogaea Unger

1937. Konstantinov, p. 266, Pl. 2, Fig. 5.
Rev. *Leucothoë protogaea* (Unger) Schimp.; Bozukov, hoc loco.

***Andromeda tremula* Heer**

1859. Heer, p. 8, Pl. 101, Fig. 27.
1964a. Palamarev, p. 31, Fig. 45.
Material: Li.

Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Andromeda vaccinifolia Unger

1850b. Unger, p. 43, Pl. 13, Figs 10-15.
1964a. Palamarev, p. 31, Fig. 44.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

APHANANTHE Planch. – ULMACEAE

Aphananthe tenuicostata Dorof.

1982a. Dorofeev, p. 22, Pl. 110, Figs 2-12; Fig.-text 10.4.
1989. Palamarev, p. 48, Pl. 4, Figs 4-5.
1971. *Moroidea* sp. Palamarev, p. 156, Pl. 24, Figs 8-9.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

APOCYNOPHYLLUM Unger – APOCYNACEAE

Apocynophyllum firma (Heer) Sveshnik. & Budantzev

1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko argillaceous sandstone Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

Apocynophyllum helveticum Heer

1859. Heer, p. 191, Pl. 154, Figs 2-3.
1937. Konstantinov, sub. sp. indet., Pl. 5, Figs 12-13, det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14, Pl. 1.
1963b. Palamarev, p. 84, Pl. 3, Fig. 41.
1967. Palamarev, p. 97.
1998. Palamarev & al., p. 15, Pl. 2; p. 19, Pl. 3.
2000. Bozukov, p. 26, Pl. 2, Fig. 3.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Apocynophyllum neriifolium Heer

1861. Heer, p. 419, Pl. 6, Figs 12 f-g; Pl. 8, Figs 1-8.
1994. Palamarev & Petkova, p. 37, Pl. 2, Figs 3, 6, 10.
1995. Palamarev & Staneva, p. 119, Pl. 2, Fig. 4.
1999a. Palamarev & al., p. 39, Pl. 2, Fig. 8.
1999b. Palamarev & al., p. 20, Pl. 6, Fig. 11; Pl. 8, Fig. 7.
Material: Li.
Location and stratigraphical range: Gorno Voivodino (Haskovo limnestone formation, Upper Eocene – Lower Oligocene); Gozdyuvska Mahala (Gozdevitsa sandy-conglomerate Formation, Lower Oligocene); Goudevitsa (Goudevitsa Formation, Upper Eocene); Staro Selo (Souhostrel Formation, Upper Eocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Belitsa (Sandstone and sandy argillaceous formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Brajkovitsa (argillite from Lakavishki Graben, Lower Oligocene); Gela (Argillaceous sandstone formation, Upper Eocene – Lower Oligocene); Mougla (Sandstone formation, Lower Oligocene).
Collection: IB (BAS).

ARALIA L. – ARALIACEAE

Aralia crassa Dorof.

1963. Dorofeev, p. 246, Pl. 43, Figs 31-34.
1971. Palamarev, p. 157, Pl. 22, Figs 13, 17.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Aralia rugosa Dorof.

1963. Dorofeev, p. 245, Pl. 43, Figs 13-16.
1994a. Palamarev, p. 144, Pl. 3, Figs 4-15.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Pontian); Ognyanovo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

ARBUTUS L. – ERICACEAE

***Arbutus* aff. *andrachne* L.**

1999b. Bozukov, p. 52, Pl. 1, Fig. 2.
1929. *Arbutus andrachne* L.; Stojanoff & Stefanoff, p. 86, Fig. 8; Pl. 12, Fig. 9; Fig.-text 22.
1935. Stefanov & Jordanov, p. 70, Pl. 23, Figs 5-7; Fig.-text 73.
1967. *Arbutus* cf. *andrachne* L. foss.; Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Arbutus elegans* Kolak.**

1957. Kolakovsky, p. 259, Pl. 8, Fig. 7.
1987. Palamarev & Petkova, p. 99, Pl. 26, Fig. 8.
1962. *Arbutus* aff. *unedo* L.; Hadžiev & Palamarev, p. 11, Fig. 2v.
Material: Li.
Location and stratigraphical range: Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Arbutus guriensis* Usnadze**

1955. Usnadze, p. 51, Pl. 9, Fig. 1.
1987. Palamarev & Petkova, p. 99, Pl. 26, Figs 6-7.
1999b. Bozukov, p. 52, Pl. 1, Fig. 2.
1966. *Ilex georgica* Kolak.; Petkova & Kitanov, p. 16, Pl. 5, Fig. 1; Pl. 8, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi, Tolovitsa, Shishmanovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Arbutus aff. *unedo* L.

1962. Hadžiev & Palamarev, p. 11, Fig. 2v.
Rev. 1987. *Arbutus elegans* Kolak.; Palamarev & Petkova, p. 99, Pl. 26, Fig. 8.

ARCTOSTAPHYLOS Adans. – ERICACEAE

***Arctostaphylos uva-ursi* Spreng.**

1929. Stojanoff & Stefanoff, p. 88, text-Fig. 23, Figs 5-7; Pl. 6, Figs 11-12.
1934. Stefanov & Jordanov, p. 31, Pl. 8, Figs 9-11.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

ARDISIA Sw. – MYRSINACEAE

***Ardisia* aff. *crispa* DC.**

1971. Palamarev, p. 157, Pl. 22, Figs 20-21.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Ardisia galica* Boulay**

1887. Boulay, p. 24.
1999b. Bozukov, p. 52, Pl. 2, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

BANISTERIA L. – MALPIGHIACEAE

***"Banisteria" helvetica* Heer**

1859. Heer, p. 65, Pl. 121, Pl. 8.
1964a. Palamarev, p. 25, Fig. 28.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation Middle Miocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Malpigiaceae* is questionable.

BANKSIA L. f. – PROTEACEAE

***"Banksia" helvetica* Heer**

1856. Heer, p. 98, Pl. 97, Figs 44-48; Pl. 98, Fig. 16.
1963b. Palamarev, p. 75, Pl. 2, Fig. 16.
1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Proteaceae* is questionable.

BAUHINIA L. – CAESALPINIACEAE

***Bauhinia bulgarica* Kitan. fil.** (Plate III, Fig. 3).

1980. Kitanov, p. 95, Pl. 2, Figs 1-2.
Holotypus: Pl. 2, Figs 1-2, (N G-3174), Kitanov (1980).
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian).
Collection: IB (BAS).

BECKTONIA Chandler – MORACEAE

***Becktonia hantonesis* Chandler**

1961. Chandler, p. 113, Pl. 25, Fig. 39.
1973. Palamarev, p. 82, Pl. 2, Figs 3, 4.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

BENZOIN Fabric. – LAURACEAE

Benzoin antiquum Heer

1935. Stefanov & Jordanov, p. 52, Pl. 18, Figs 1-4; Fig.-text 48.
Rev. 1987. *Lindera antiqua* (Heer) R.S. Lamotte; Palamarev & Petkova, p. 41, Pl. 10, Fig. 4.

BERBERIS L. – BERBERIDACEAE

***Berberis berberidifolia* (Heer) Palam. & Petkova**

1987. Palamarev & Petkova, p. 47, Pl. 14, Fig. 7.
1995b. Uzunova, p. 2, Pl. 1, Figs 1-5.
1859. *Ilex berberidifolia* Heer, p. 72, Pl. 122, Figs 12-18.
Lectotypus: 1859. Heer, Pl. 122, Fig. 14, selected by Palamarev & Petkova (1987).
Paratypus: Cuticle – Pl. 1, Fig. 2, Uzunova (1995b).
Material: Cu, Li
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Berberis vulgaris* L. foss.**

1982. Palamarev, p. 12, Pl. 4, Figs 3-4.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

BERCHEMIA Neck. ex DC. – RHAMNACEAE

***Berchemia* cf. *berchemiaefolia* (Makino) Koidz.**

1973. Palamarev, p. 91, Pl. 4, Figs 3-5.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

***Berchemia multinervis* (A. Braun) Heer**

1859. Heer, p. 77, Pl. 128, Figs 9-18.
1964a. Palamarev, p. 28, Fig. 38.
1967. Petkova, p. 149, Pl. 7, Fig. 10.
1987. Palamarev & Petkova, p. 135, Pl. 33, Fig. 2.
2000. Bozukov, p. 23, Pl. 1, Fig. 3.
1836. *Rhamnus multinervis* A. Braun in Buckland, p. 513.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Pelovo, Sinagovtsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

BETULA L. – BETULACEAE

***Betula* aff. *alleghaniensis* Britton**

1999a. Bozukov, p. 8, Pl. 5, Fig. 4.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Betula attenuata* Göpp.**

1855. Göppert, p. 11, Pl. 3, Fig. 6.
1932. Konjarov, p. 54, Pl. 19, Fig. 7.
Material: Li.
Location and stratigraphical range: Pernik (Coal-bearing formation, Upper Oligocene).
Collection: Unkown.

***Betula brongniartii* Ettingsh.**

1851. Ettingshausen, p. 12, Pl. 1, Fig. 8.
1999a. Bozukov, p. 9, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Betula sp. aff. *B. corylifolia* Regel & Maxim. ex sect. *Costatae*

1929. Stojanoff & Stefanoff, p. 40, Pl. 5, Fig. 3; Fig.-text 10.2.
Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

***Betula macrophylla* (Göpp.) Heer**

1868. Heer, p. 146, Pl. 25, Figs 11-19.
1932. Konjarov, p. 54, Pl. 20, Figs 7-8.
1999a. Bozukov, p. 9, Pl. 5, Fig. 2.
1855. *Alnus macrophylla* Göpp.; Göppert, p. 12, Pl. 4, Fig. 6; Pl. 5, Fig. 1.
Material: Li.
Location and stratigraphical range: Pernik (Coal-bearing formation, Upper Oligocene); Satovcha (Sivik Formation – Middle Miocene).
Collection: IB (BAS).

***Betula pendula* Roth foss.**

1984. Kitanov, p. 56, Fig. 10.4.
1929. *B. verrucosa* Ehrhart; Stojanoff & Stefanoff, p. 39, Fig.-text 11.4.
Material: Li.
Location and stratigraphical range: Gurmen (Baldevo Formation, Lower Pontian – Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Betula pubescens* Ehrh. foss.**

1984. Kitanov, p. 58, Fig. 11.1.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Betula subpubescens* Göpp.**

1855. Göppert, p. 11, Pl. 3, Fig. 9.
1987. Palamarev & Petkova, p. 76, Pl. 21, Figs 5, 7.
1999a. Bozukov, p. 10, Pl. 2, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Vodnentsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Betula verrucosa Ehrh.

1929. Stojanoff & Stefanoff, p. 39, Fig.-text 11.4.
Rev. 1984. *B. pendula* Roth foss.; Kitanov, p. 56, Fig. 10.4.

BOEHMERIA Jacq. – URTICACEAE

***Boehmeria* cf. *europea* Dorof.**

1994a. Palamarev, p. 140, Pl. 3, Fig. 3.
1994b. Palamarev, p. 26, Pl. 1, Fig. 8; Pl. 2, Fig. 1.
1982b. Dorofeev, p. 56, Pl. 131, Figs 11-15, Fig.-text 43.1-8.
1970. *B. cylindrica* Willd.; Palamarev, p. 41, Pl. 1, Figs 10-11.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene); Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

***Boehmeria excelsaefolia* Friedrich**

1883. Friedrich, p. 167, Pl. 22, Figs 1-7; Pl. 28, Figs 12-13.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko argillaceous sandstone Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

BOMBAX L. – BOMBACACEAE

***"Bombax" dechenii* (C.O. Weber) Friedrich**

1883. Friedrich, p. 142, Pl. 17, Figs 1-4; Pl. 18.
1964a. Palamarev, p. 30, Pl. 12, Fig. 39.
1852. *Dombeyopsis dechenii* C.O. Weber, p. 193, Pl. 21, Fig. 10.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Bombacaceae* is questionable.

BRASENIA Schreb. – CABOMBACEAE

***Brasenia bashkirica* Dorof.**

1974a. Dorofeev, 55, Pl. 95, Figs 11-15.

1994a. Palamarev, p. 136, Pl. 2, Figs 1-3.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Pontian).
Collection: IB (BAS).

Brasenia ovula (Brongn.) E. Reid & Chandler

1926. Reid & Chandler, p. 99, Pl. 6.15-18.
1971. Palamarev, pp. 154, 161.
1973. Palamarev, p. 79, Pl. 1, Figs 6-9.
1822. *Carpolithus ovulum* Brongn.; Brongniart, p. 366, Pl. 11.6.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Brasenia cf. *ovula* (Brongn.) E. Reid & Chandler

1967. Palamarev, p. 97.
Material: Ca.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Brasenia reidiae Dorof.

1974a. Dorofeev, p. 60, Pl. 98, Figs 1-7; Fig.-text 27.4.
1989. Palamarev, p. 48, Pl. 3, Figs 4-5.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Brasenia cf. *schreberi* J.F. Gmel.

1982. Palamarev, p. 8, Pl. 3, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

Brasenia tuberculata C. & E. Reid

1915. Reid & Reid, p. 86, Pl. 6, Figs 25-27.
1970. Palamarev, p. 39, Pl. 1, Figs 7-8.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

BRASSAIOPSIS Decne & Planch. – ARALIACEAE

Brassaiopsis jatrophaefolia (Unger) Palam. & Petkova

1987. Palamarev & Petkova, p. 128, Pl. 33, Figs 4a-b, 5.
2000. Bozukov, p. 15, Pl. 1, Fig. 1.
1847. *Platanus jatrophaefolia* Unger, p. 137, Pl. 45, Fig. 7.
Holotypus: Pl. 45, Fig. 7, Unger (1847).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

BROUSSONETIA L'Hér. – MORACEAE

Broussonetia intermedia Palam.

1987. Palamarev in Palamarev & Petkova, p. 59, Pl. 16, Figs 3-4.
Holotypus: Pl. 16, Fig. 3, Palamarev & Petkova (1987).
Material: Ca.
Location and stratigraphical range: Drenovets, Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Broussonetia aff. *papyrifera* (L.) L'Hér.

1998b. Bozukov, p. 10, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

BUMELIA Sw. – SAPOTACEAE

Bumelia aff. *lanuginosa* (Michx.) Pers.

1929. Stojanoff & Stefanoff, p. 89, Figs 1-3; Pl. 12, Figs 16-17; Fig.-text 23.
1934. Stefanov & Jordanov, p. 33, Pl. 3, Fig. 19.
1935. Stefanov & Jordanov, p. 74, Pl. 23, Fig. 9; Pl. 24, Fig. 7; Fig.-text 80.
1988. Palamarev & Kitanov, p. 195, Pl. 11, Fig. 2.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower

Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Bumelia minor* (Unger) Unger**

1866. Unger, p. 25, Pl. 6, Figs 11-19.
1964a. Palamarev, p. 32, Fig. 48.
1967. Palamarev, p. 94.
1987. Palamarev & Petkova, p. 103, Pl. 27, Fig. 3.
1999a. Palamarev & al., p. 34, Pl. 1, Fig. 12.
1999b. Palamarev & al., p. 16, Pl. 8, Fig. 6.
1850b. *B. oreadum* Unger, p. 42, Pl. 22, Figs 7-14.
1995. Palamarev & Staneva, p. 118, Pl. 3, Fig. 4.
1850a. *Pyrus minor* Unger, p. 481.
1850b. Unger, p. 53, Pl. 38, Figs 16-24.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Koilovtsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Bumelia oreadum Unger

1967. Palamarev, p. 94.
1995. Palamarev & Staneva, p. 118, Pl. 3, Fig. 4.
Rev. 1999b. *Bumelia minor* (Unger) Unger; Palamarev & al., p. 16, Pl. 8, Fig. 6.

BURTONELLA Chandler – CAPPARIDACEAE

***Burtonella* cf. *emarginata* Chandler**

1973. Palamarev, p. 85, Pl. 2, Figs 15-16.
1962. *B. emarginata* Chandler, p. 37, Pl. 4, Figs 34-35.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

BUXUS L. – BUXACEAE

***Buxus pliocenica* Saporta & Marion**

1876. Saporta & Marion, p. 144, Pl. 32, Figs 6-8.
1988. Palamarev & Kitanov, p. 186, Pl. 4, Fig. 7.
1994a. Palamarev, p. 138, Pl. 1, Fig. 11.
1995b. Uzunova, p. 6, Pl. 3, Figs 1-4.
1929. *B. sempervirens* L.; Stojanoff & Stefanoff, p. 78, Pl. 11, Fig. 13; Fig.-text 21.1.
1934. Stefanov & Jordanov, p. 25, Pl. 7, Figs 13-14.
1935. Stefanov & Jordanov, p. 61.
Material: Cu, Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Coalbearing formation, Pontian – Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Buxus ruzinciniana* Uzunova**

1995b. Uzunova, p. 7, Pl. 3, Figs 5-7.
Holotypus: Pl. 3, Figs 5-7, Uzunova (1995b).
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Buxus sempervirens L.

1929. Stojanoff & Stefanoff, p. 78, Pl. 11, Fig. 13; Fig.-text 21.1.
1934. Stefanov & Jordanov, p. 25, Pl. 7, Figs 13-14.
1935. Stefanov & Jordanov, p. 61.
Rev. 1994. *Buxus pliocaenica* Saporta & Marion; Palamarev, p. 138, Pl. 1, Fig. 11.

BYTTNERIA Loefl. – STERCULIACEAE

Byttneria tiliaefolia Depape

1962. Hadžiev & Palamarev, p. 11.
1964a. Palamarev, p. 30, Pl. 10, Fig. 2; Fig.-text 40.
Rev. 1987. *Byttneriophyllum tiliaefolium* (A. Braun) Knobloch & Kvaček; Palamarev & Petkova, p. 106, Pl. 28, Figs 1, 4.

BYTTNERIOPHYLLUM Givul. ex Knobloch & Kvaček – STERCULIACEAE

***Byttneriophyllum tiliaefolium* (A. Braun) Knobloch & Kvaček**

1965. Knobloch & Kvaček, p. 128, Pl. 1, Figs 1-3; Pl. 5, Figs 1-6; Pl. 6, Figs 1-3.
1982. Kitanov, p. 37, Pl. 2, Fig. 1.
1987. Palamarev & Petkova, p. 106, Pl. 28, Figs 1, 4.
1999b. Bozukov, p. 53, Pl. 2, Fig. 2.
1845. *Cordia tiliaefolia* A. Braun, p. 170.

1962. *Byttneria tiliaefolia* Depape; Hadžiev & Palamarev, p. 11.
1964a. Palamarev, p. 30, Pl. 10, Fig. 2; Fig.-text 40.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Stoudeno Bouche (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian); Sofia basin – Zemlyane (Lozenets Formation, Romanian).
Collection: IB (BAS).

CAESALPINIA L. – FABACEAE

Caesalpinia haidingeri auct. Palam.

1963b. Palamarev, p. 82, Pl. 3, Fig. 37.
1967. Palamarev, p. 95.
Rev.: 1999a. *Caesalpinites haidingeri* Ettingsh.; Palamarev & al., p. 35.

CAESALPINITES Saporta – FABACEAE

***Caesalpinites haidingeri* Ettingsh.**

1853. Ettingshausen, p. 28, Pl. 29, Figs 21-39.
1999a. Palamarev & al., p. 35.
1963b. *Caesalpinia haidingeri* auct. Palam.; Palamarev, p. 82, Pl. 3, Fig. 37.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Caesalpinites inaequalis* Palam. & Petkova** (Plate III, Fig. 5).

1987. Palamarev & Petkova, p. 117, Pl. 29, Fig. 4.
Holotypus: Pl. 29, Fig. 4, (N R-3697a), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Caesalpinites salteri* (Heer) Rüffle**

1963. Rüffle, p. 215, Pl. 9, Figs 21-22.
1988. Černjavska & al., p. 31.
1859. *Colutea salteri* Heer, p. 101, Pl. 82, Figs 47-57.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko argillaceous sandstone Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

CALLICOMA Andrews – CUNONIACEAE

***"Callicoma" microphylla* Ettingsh.**

1869. Ettingshausen, p. 5, Pl. 11, Figs 14-22.
1932. Konjarov, p. 129, Pl. 41, Figs 4, 4a.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Dospei (Bituminous schist formation, Upper Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Cunoniaceae* is questionable.

CALLISTEMOPHYLLUM Ettingsh. – MYRTACEAE

***Callistemophyllum melaleuceforme* Ettingsh.**

1853. Ettingshausen, p. 84, Pl. 27, Figs 13-14.
1963b. Palamarev, p. 75, Pl. 2, Fig. 17.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CAMELLIA L. – THEACEAE

***Camellia abchasica* (Kolak.) Kolak.**

1959. Kolakovsky, p. 250, Pl. 19, Figs 1-3.
1987. Palamarev & Petkova, p. 93, Pl. 25, Figs 1a-b.
1999a. *Camellia* cf. *abchasica* (Kolak.) Kolak.; Palamarev & al., p. 33, Pl. 4, Fig. 2.
1999b. Palamarev & al., p. 15, Pl. 5, Fig. 5.
1957. *Ternstroemia abchasica* Kolak.; Kolakovsky, p. 294, Pl. 20, Fig. 4.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

CARPINUS L. – BETULACEAE

***Carpinus betulus* L. foss.**

1934. Stefanov & Jordanov, p. 15, Pl. 3, Fig. 10; Pl. 5, Figs 7-8.
1935. Stefanov & Jordanov, p. 36, Fig. 36; Pl. 8, Fig. 5.
1956. Kitanov & Nikolova, p. 92, Fig. 6; Pl. 1, Fig. 4; Pl. 2, Figs 1-3.
1984. Kitanov, p. 53, Figs 9.2-3.
Material: Li.
Location and stratigraphical range: Pelovo, Staver-tsi (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Carpinus aff. *duinensis* Scop.

1929. Stojanoff & Stefanoff, p. 43, Fig. 8.
Rev. 1988. *Carpinus orientalis* Mill. foss.; Palamarev & Kitanov, p. 193, Pl. 8, Fig. 2.

***Carpinus europaea* Negru**

1969. Negru, p. 765, Pl. 1, Figs 1-8; Pl. 2, Figs 5-8.
1982. Palamarev, p. 14, Pl. 4, Fig. 8.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

***Carpinus grandis* Unger emend. Heer**

1852. Unger, p. 11, pars Pl. 10, Figs 4-5 (non Figs 2-3 = *Carpinus* sp. fruct.)
1856. Heer, p. 40, pars Pl. 72, Figs 2-11, 14, 16-24 (non Figs 12-13, 15 = *Carpinus* sp. fruct.); Pl. 73, Figs 2-4.
1932. Konjarov, p. 54, pars Pl. 20, Figs 2, 4 (non Fig. 3 = *Carpinus* sp. fruct.); Pl. 24, Figs 3, 5 (non Fig. 4 = *Carpinus* sp. fruct.).
1937. Konstantinov, sub sp. indet., Pl. 2, Figs 10-12; Pl. 3, Fig. 1, det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14, Pl. 1.
1961. Palamarev, p. 181, Fig. 9.
1964a. Palamarev, p. 15.
1967. Petkova, p. 139, Pl. 3, Figs 4-5.
1967. Palamarev, p. 93.
1987. Palamarev & Petkova, p. 78, Pl. 21, Fig. 6.
1998. Palamarev & al., pp. 14-15.
1999a. Bozukov, p. 10, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Vodnyantsi, Cherno Pole (Krivodol Formation, Bessarabian); Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formation, Maeotian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

Carpinus marmaroschica Iljinsk.

1984. Kitanov, p. 53, Fig. 10: 2.
Rev. 1988. *Carpinus orientalis* Mill. foss.; Palamarev & Kitanov, p. 193, Pl. 8, Fig. 2.

***Carpinus mestensis* Kitan. fil.** (Plate II, Fig. 3).

1980. Kitanov, p. 93, Pl. 1, Figs 4-6.
Holotypus: Pl. 1, Figs 4-6, (N G-3299), Kitanov (1980).
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian).
Collection: IB (BAS).

***Carpinus* cf. *neilreichii* Kováts**

1999a. Palamarev & al., p. 33, Pl. 3, Fig. 10.
1856. Kováts, p. 23, Pl. 4, Figs 1-4.
Material: Ca.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

***Carpinus orientalis* Mill. foss.**

1988. Palamarev & Kitanov, p. 193, Pl. 8, Fig. 2.
1929. *Carpinus* aff. *duinensis* Scop.; Stojanoff & Stefanoff, p. 43, Fig. 8.
1984. *C. marmaroschica* Iljinsk.; Kitanov, p. 53, Fig. 10. 2.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Carpinus pannonica* Dorof.**

1982b. Dorofeev, p. 169, Pl. 167, Figs 1-8.
1994a. Palamarev, p. 139, Pl. 5, Figs 4-5.
1989. *Carpinus* cf. *pannonica* Dorof.; Palamarev, p. 49, Pl. 3, Fig. 4.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Carpinus pyramidalis Göpp.

1932. Konjarov, p. 54, Pl. 20, Fig. 4.
Rev. 1987. *Carpinus grandis* Unger; Palamarev & Petkova, p. 77, Pl. 21, Fig. 6.

***Carpinus suborientalis* Saporta**

1876. Saporta in Saporta & Marion, p. 67.
1999a. Bozukov, p. 10, Pl. 5, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene)
Collection: IB (BAS).

CARYA Nutt. – JUGLANDACEAE

Carya bilinica (Unger) Ettingsh.

1964a. Palamarev, p. 15.
Rev. 1987. *Pterocarya paradisiaca* (Unger) Iljinsk.; Palamarev & Petkova, p. 84, Pl. 23, Figs 1, 3, 6-8.

***Carya denticulata* (C.O. Weber) Iljinsk.**

1964. Iljinskaja in Kolakovsky, p. 95, Pl. 36, Figs 3-6.
1967. Petkova, p. 139, Pl. 2, Figs 3-5; Pl. 10, Fig. 5.
1987. Palamarev & Petkova, p. 87, Pl. 23, Figs 2, 4-5.
1995. *Carya* cf. *denticulata* (C.O. Weber) Iljinsk.; Palamarev & Staneva, p. 118.
1999b. Bozukov, p. 48, Pl. 3, Fig. 3.
1932. *C. serraefolia* (Göpp.) Kräusel; Konjarov, Pl. 23, Fig. 7.
1964a. Palamarev, Pl. 15.
1852. *Juglans denticulata* C.O. Weber, p. 211, Pl. 23, Fig. 10.
1956. *Pterocarya caucasica* C.A. Mey.; Kitanov & Nikolova, p. 88, Pl. 1, Fig. 1; Fig.-text 2.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Belo Pole, Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi, Shishmanovo, Stavertsi, Tolovitsa (Krivodol Formation, Volhynian); Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Carya serraefolia (Göpp.) Kräusel

1932. Konjarov, p. 54, Pl. 23, Fig. 7.
1964a. Palamarev, p. 15.
Rev. 1987. *Carya denticulata* (C.O. Weber) Iljinsk.; Palamarev & Petkova, p. 87, Pl. 23, Figs 2, 4-5.

***Carya* sp. cf. *C. bilinica* Ettingsh.**

1929. Stojanoff & Stefanoff, p. 36.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

CASSIA L. – FABACEAE

Cassia ambigua Unger

1964a. Palamarev, p. 24, Fig.-text 23.
1967. Palamarev, p. 95.
Rev. 1999a. *Cassiophyllum ambiguum* (Unger) Palam., Kitan. fil., Bozukov & Staneva; Palamarev & al., p. 17, Pl. 7, Fig. 4.

***Cassia lignitum* Unger**

1864. Unger, p. 30, Pl. 10, Figs 71-76.
1932. Konjarov, p. 98, Pl. 30, Fig. 5.
1937. Konstantinov, p. 266, Pl. 4, Fig. 13.
1998. Palamarev & al., p. 14.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

Cassia berenices Unger

1932. Konjarov, p. 125, pars Pl. 37, Figs 5-6 (non Figs 4, 7-8 = sp. indet.).
Rev. 1987. *Cassiophyllum berenices* (Unger) Kräusel; Palamarev & Petkova, p. 116, Pl. 29, Fig. 3.

Cassia hyperborea Unger

1964a. Palamarev, p. 24.
Rev. 1987. *Cassiophyllum berenices* (Unger) Krausel; Palamarev & Petkova, p. 116, Pl. 29, Fig. 3.

***CASSIOPHYLLUM* Geyl. – FABACEAE**

Cassiophyllum ambiguum (Unger) Palam., Kitan. fil., Bozukov & Staneva

1999b. Palamarev & al., p. 17, Pl. 7, Fig. 4.
1999a. Palamarev & al., p. 37, Pl. 2, Fig. 6.
1850a. *Cassia ambigua* Unger, p. 492.
1964a. Palamarev, p. 24, Fig.-text 23.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Cassiophyllum berenices (Unger) Kräusel

1938. Kräusel, p. 66, Pl. 9, Fig. 10; Fig.-text 20c.
1967. Palamarev, p. 95.
1987. Palamarev & Petkova, p. 116, Pl. 29, Fig. 3.
1999b. Bozukov, p. 54, Pl. 4, Fig. 3.
1850b. *Cassia berenices* Unger, p. 58, Pl. 43, Figs 4-10.
1932. Konjarov, p. 125, pars Pl. 37, Figs 5-6 (non Figs 4, 7-8 = sp. indet.).
1964a. *C. hyperborea* Unger; Palamarev, p. 24, Fig.-text 22.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Brushlyanitsa, Rouzhintsi (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formation, Maeotian).
Collection: IB (BAS).

Cassiophyllum hyperboreum (Unger) Kräusel

1995. Palamarev & Staneva, p. 119, Pl. 1, Fig. 4.
1850b. *Cassia hyperborea* Unger, p. 58, Pl. 43, Figs 1-3.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***CASTANEA* Mill. – FAGACEAE**

Castanea atavia Unger

1932. Konjarov, p. 125, Pl. 32, Fig. 2.
1964a. Palamarev, p. 18 (sine descr.).
Rev. 1999a. *Castanopsis pliovariabilis* (Kolak.) Kolak.; Bozukov, p. 4, Pl. 1, Fig. 5.

1932. Konjarov, p. 166, Pl. 53, Fig. 4
Rev. 1999a. *Castanea sativa* Mill. foss.; Bozukov, p. 3, Pl. 1, Figs 2, 4.

1962. Hadžiev & Palamarev, p. 7.
1966. Petkova & Kitanov, p. 8, Pl. 2, Fig. 1; Pl. 6, Figs 2, 5.
1967. Petkova, p. 142, Pl. 4, Fig. 2; Pl. 10, Fig. 8; Pl. 11, Figs 1-2.
1967. Palamarev, p. 93.
Rev. 1987. *Castanea sativa* Mill. foss.; Palamarev & Petkova, p. 64, Pl. 16, Figs 6-8.

Castanea sativa Mill. foss.

1966. Petkova & Kitanov, p. 8, Pl. 2, Fig. 1; Pl. 6, Figs 2, 5.
1984. Kitanov, p. 63, Fig. 13: 2.
1987. Palamarev & Petkova, p. 64, Pl. 16, Figs 6-8.
1999a. Bozukov, p. 3, Pl. 1, fig 2, 4.
1929. *C. vesca* Gaertn.; Stojanoff & Stefanoff, p. 46, Pl. 5, Figs 11-12; Figs-text 12-13.
1940. Kitanov, p. 8, Pl. 1, Fig. 4.
1932. *C. atavia* Unger; Konjarov, p. 166, Pl. 53, Fig. 4.
1962. Hadžiev & Palamarev, p. 7.
1967. Petkova, p. 142, Pl. 4, Fig. 2; Pl. 10, Fig. 8; Pl. 11, Figs 1-2.
1967. Palamarev, p. 63.
1934. *C. vulgaris* Lam.; Stefanov & Jordanov, p. 16, Pl. 5, Figs 9-10.
1956. Kitanov & Nikolova, p. 95, Fig. 7.
1960. Kitanov, p. 370, Pl. 1, Fig. 3.
Material: Li, Bl.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gramada, Kladoroub-Ostrokaptsi, Montana, Pelovo, Rouzhintsi, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Castanea vesca Gaertn.

1929. Stojanoff & Stefanoff, p. 46, Pl. 5, Figs 11-12; Figs-text 12-13.

1940. Kitanov, p. 8, Pl. 1, Fig. 4.
Rev. 1987. *Castanea sativa* Mill. foss.; Palamarev & Petkova, p. 64, Pl. 16, Figs 6-8.

Castanea vulgaris Lam.

1934. Stefanov & Jordanov, p. 16, Pl. 5, Figs 9-10.
1960. Kitanov, p. 370, Pl. 1, Fig. 3.
Rev. 1987. *Castanea sativa* Mill. foss.; Palamarev & Petkova, p. 64, Pl. 16, Figs 6-8.

CASTANEOPHYLLUM Jones & Dilcher – FAGACEAE

Castaneophyllum venosum (Rossm.) Knobloch & Kvaček

1996. Knobloch & Kvaček in Knobloch & al., p. 78, Pl. 22, Figs 4-5;
1998. Palamarev & Mai, p. 239.
1840. *Phyllites venosa* Rossm.; Rossmässler, p. 34, Pl. 7.32.
1975. *Quercus venosa* (Rossm.) Knobloch; Palamarev & Petkova, p. 211, Pl. 4, Fig. 9.
Material: Li.
Location and stratigraphical range: Belitsa (Sandstone and sandy argillaceous formation, Lower Oligocene); Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

CASTANOPSIS (D. Don) Spach – FAGACEAE

Castanopsis aff. _concolor_ Rehder & E.H. Wilson foss.

1963b. Palamarev, p. 73, Pl. 1, Fig. 10.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Castanopsis dechenii (C.O. Weber) Kräusel & Weyland

1967. Palamarev, p. 93.
1987. Palamarev & Petkova, p. 65, Pl. 17, Figs 4-5, 8-9.
Rev. 1998. *Trigonobalanopsis rhamnoides* (Rossm.) Kvaček & H. Walther; Palamarev & Mai, p. 236.

Castanopsis elisabethae Kolak.

1955. Kolakovsky, p. 237, Pl. 17, Figs 4-5.
1987. Palamarev & Petkova, p. 66, Pl. 17, Figs 1-3.
Material: Li.
Location and stratigraphical range: Rouzhintsi, Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Castanopsis furcinervis (Rossm.) Kräusel & Weyland

1962a. Palamarev, p. 161, Pl. 1, Figs 1, 3; Pl. 2, Figs 1, 3-4; Pl. 3, Figs 1-5; Figs-text 1-2.
1963b. Palamarev, p. 93.
1966. Palamarev & Petkova, p. 57.
1975. Palamarev & Petkova, p. 219, Pl. 7, Fig. 1.
Rev. 1998. *Eotrigonobalanus furcinervis* (Rossm.) Walther & Kvaček; Palamarev & Mai, p. 243.

Castanopsis pliovariabilis (Kolak.) Kolak.

1980. Kolakovsky in Iljinskaja, p. 24.
1999a. Bozukov, p. 4, Pl. 1, Fig. 5.
1964. *Quercus pliovariabilis* Kolakovsky, p. 88, Pl. 31, Fig. 1.
1932. *Castanea atavia* Unger; Konjarov, p. 125, Pl. 32, Fig. 2.
1964a. Palamarev, p. 18.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Oranovo (Simitli Formation, Maeotian).
Collection: IB (BAS).

CAXTONIA E. Reid & Chandler – RUTACEAE

Caxtonia cf. _elongata_ Chandler

1973. Palamarev, p. 89, Pl. 3, Figs 10-11.
1961. Chandler, p. 194, Pl. 19, Figs 37-39.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

CEANOTHUS L. – RHAMNACEAE

Ceanothus aff. _americanus_ L.

2000. Bozukov, p. 23, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

CEDRELA P. Browne – MELIACEAE

Cedrela attica (Unger) Palam. & Petkova

1987. Palamarev & Petkova, p. 119, Pl. 21, Figs 1-2, 6.
1999b. Bozukov, p. 55, Pl. 7, Fig. 5.

1962. *C. sarmatica* Kovács; Hadžiev & Palamarev, p. 10, Fig. 2b.
1867. *Juglans attica* Unger, p. 75, Pl. 14, Figs 11-12.
Lectotypus: 1867. Unger, Pl. 14, Fig. 12, selected by Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi, Stoudeno Bouche (Krivodol Formation, Volhynian); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Cedrela sarmatica Kovács

1962. Hadžiev & Palamarev, p. 10, Fig. 2 b.
Rev. 1987. *Cedrela attica* (Unger) Palamarev & Petkova, p. 119, Pl. 31, Figs 1-2, 6.

CELASTROPHYLLUM Wonnacott – CELASTRACEAE

Celastrophyllum andromedae (Unger) Palam., Kitan. fil., Bozukov & Staneva

1999b. Palamarev & al., p. 19, Pl. 6, Fig. 10.
1850b. *Celastrus andromedae* Unger, p. 47, Pl. 30, Figs 2-10.
1963b. Palamarev, p. 78, Pl. 2, Fig. 25.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene), Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Celastrophyllum crepinii Saporta & Marion

1878. Saporta & Marion, p. 85, Pl. 14, Fig. 9.
1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko argillaceous sandstone Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

Celastrophyllum mirabile Palam. & Petkova

1975. Palamarev & Petkova, p. 213, Pl. 1, Fig. 4; Pl. 5, Fig. 1.
Holotypus: Pl. 5, Fig. 1, Palamarev & Petkova (1975).
Material: Li.
Location and stratigraphical range: Braikovitsa (Argillite from Lakavishki Graben, Lower Oligocene).
Collection: IB (BAS).

Celastrophyllum pseudoilex (Ettingsh.) Palam.

1988. Palamarev in Černjavska & al., p. 31.
1853. *Celastrus pseudoilex* Ettingsh.; Ettingshausen, Pl. 24, Figs 30-36.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko argillaceous sandstone Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

Celastrophyllum serratum Saporta & Marion

1878. Saporta & Marion, p. 87, Pl. 14.3.
1975. Palamarev & Petkova, p. 214, Pl. 1, Fig. 6; Pl. 5, Figs 2-3.
1999b. Palamarev & al., p. 19, Pl. 10, Fig. 5.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Georgi Dobrevo (Limestone layer, Priabonian – Lower Oligocene).
Collection: IB (BAS).

CELASTRUS L. – CELASTRACEAE

Celastrus aeoli Ettingsh.

1853. Ettingshausen, p. 72, Pl. 24, Figs 9-11.
1963b. Palamarev, p. 78, Pl. 2, Fig. 26.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Celastrus acherontis Ettingsh.

1853. Ettingshausen, p. 71, Pl. 24, Fig. 14.
1963a. Palamarev, p. 210, Fig.-text 4.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Celastrus andromedae Unger

1963b. Palamarev, p. 78, Pl. 2, Fig. 25.
1967. Palamarev, p. 96.
Rev. 1999b. *Celastrophyllum andromedae* (Unger) Palamarev, Kitan. fil., Bozukov & Staneva, p. 19, Pl. 6, Fig. 10.

***Celastrus elaenus* Unger**

1850b. Unger, p. 47, Pl. 30, Figs 18-21.
1964a. Palamarev, p. 23, Fig. 29.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Celastrus minutus* Friedrich**

1883. Friedrich, p. 147, Pl. 11, Figs 11-13.
2000. Bozukov, p. 22, Pl. 1, Fig. 6.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Celastrus oeningensis* Wonnacott**

1955. Wonnacott, p. 64.
1967. Petkova, p. 147, Pl. 7, Fig. 7; Pl. 13, Fig. 3.
1987. Palamarev & Petkova, p. 131, Pl. 33, Fig. 3.
1864. *C. cassinefolius* Unger, p. 509 (nom. nudum).
Lectotype: Unger (1864), Pl. 2., Fig. 1 sub C. *cassinefolius,* selected by Palamarev & Petkova (1967).
Material: Li.
Location and stratigraphical range: Pelovo, Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian); Belo Pole (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Celastrus persei* Unger**

1850b. Unger, p. 460, Pl. 30, Fig. 1.
1963b. Palamarev, p. 79, Pl. 2, Fig. 27.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Celastrus protogaeus* Ettingsh.**

1853. Ettingshausen, p. 70, Pl. 24, Figs 17-29.
1963a. Palamarev, p. 210, Fig.-text 5.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***CELTIS* L. – ULMACEAE**

***Celtis japetii* Unger**

1852. Unger, p. 44, Pl. 20, Figs 25-26.
1987. Palamarev & Petkova, p. 58, Pl. 15, Fig. 2.
1998b. Bozukov, p. 10, Pl. 5, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene)**;** Byalo Pole (Krivodol Formation, Bessarabian)**.**
Collection: IB (BAS).

***Celtis begonioides* Göpp.**

1855. Göppert, p. 33, Pl. 8, Fig. 10.
1998b. Bozukov, p. 9, Pl. 1, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene)**.**
Collection: IB (BAS).

***CEPHALANTHUS* L. – RUBIACEAE**

***Cephalanthus kireevskianus* (Dorof.) Dorof.**

1961. Dorofeev, p. 924.
1989. Palamarev, p. 54, Pl. 5, Figs 3, 6.
1994b. Palamarev, p. 31, Pl. 5, Fig. 7.
1959. *Carpolithes kireevskianus* Dorof.; Dorofeev, p. 124, Fig. 3.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***CERATONIA* L. – FABACEAE**

***Ceratonia emarginata* A. Braun**

1851. Braun in Stizenberger, p. 90.
1964b. Palamarev, p. 132, Pl. 1, Fig. 4; Pl. 6, Fig. 4.
1999b. Palamarev & al., p. 17, Pl. 5, Figs 7-8.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CERATOPETALUM A. Sm. – CUNONIACEAE

***Ceratopetalum haeringianum* Ettingsh.**

1853. Ettingshausen, p. 65, Pl. 22, Figs 13-26.
1963b. Palamarev, p. 82, Pl. 3, Fig. 33.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CERATOPHYLLUM L. – CERATOPHYLLACEAE

***Ceratophyllum protanaiticum* (P. Nikitin) Dorof.**

1974b. Dorofeev, p. 85, Pl. 116, Figs 8-11.
1982. Palamarev, p. 11, Pl. 4, Figs 1-2.
1987. Palamarev & Petkova, p. 47, Pl. 13, Fig. 8.
1994a. Palamarev, p. 137, Pl. 1, Figs 1-2.
1957. *Ceratophyllum submersum* L. var. *protanaiticum* P. Nikitin, p. 150, Pl. 5, Figs 19-20.
Material: Ca.
Location and stratigraphical range: Drenovets, Slavotin (Krivodol Formation, Volhynian); Sofia basin – Kutina (Gnilyane Formation, Lower Pontian); Ognyanovo (Baldevo Formation, Lower Pontian, Lower Dacian).
Collection: IB (BAS).

***Ceratophyllum balcanicum* Palam.**

1982. Palamarev, p. 11, Pl. 3, Figs 10-12.
Holotypus: Pl. 3, Fig. 10, Palamarev (1982).
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

***Ceratophyllum schrotzburgense* Hantke**

1954. Hantke, p. 71, Pl. 11, Figs 9-13.
1987. Palamarev & Petkova, p. 46, Pl. 13, Fig. 7.
1966. *C. submersum* L. foss.; Petkova & Kitanov, p. 11, Pl. 7, Fig. 4.
1982. Palamarev, p. 10, Pl. 3, Fig. 9.
Material: Li.
Location and stratigraphical range: Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

Ceratophyllum submersum L. foss.

1966. Petkova & Kitanov, p. 11, Pl. 7, Fig. 4.
1982. Palamarev, p. 10, Pl. 3, Fig. 9.
Rev. 1987. *Ceratophyllum schrotzburgense* Hantke; Palamarev & Petkova, p. 46, Pl. 13, Fig. 7.

CERCIDIPHYLLUM Siebold & Zucc. – CERCIDIPHYLLACEAE

***Cercidiphyllum crenatum* (Unger) R.W. Brown**

1935. Brown, p. 575, Pl. 68, Figs 1, 6, 9-10 (non Fig. 6a).
1937. Konstantinov, sub sp. indet., p. 266, Pl. 5, Figs 3, 5, det. Palamarev & Kitanov in Palamarev & al., p. 14. Pl. 1.
1964a. Palamarev, p. 19.
1967. Palamarev, p. 93.
1998b. Bozukov, p. 9, Pl. 3, Fig. 1.
1850a. *Dombeyopsis crenata* Unger, p. 448.
1932. *Grewia crenata* Heer; Konjarov, p. 98, Pl. 29, Figs 1-2.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Cercidiphyllum helveticum* (Heer) Jähnichen, Mai & H. Walther**

1980. Jähnichen & al., p. 371, Pl. 7, Figs 1-15; Pl. 8, Fig. 1.
1987. Palamarev & Petkova, p. 49, Pl. 13, Fig. 9.
1855. *Widdringtonia helvetica* Heer, p. 48, Pl. 16, Figs 4, 5a, 6, 9, 11-12.
Material: Li.
Location and stratigraphical range: Drenovets (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Cercidiphyllum macrophyllum* Palam. & Petkova** (Plate II, Fig. 2).

1987. Palamarev & Petkova, p. 50, Pl. 35, Figs 1a-b.
Holotypus: Pl. 35, Fig. 1a, (N R-3646), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***CHAMAEDAPHNE* Moench – ERICACEAE**

***Chamaedaphne calyculata* Moench**

1934. Stefanov & Jordanov, p. 31, Pl. 3, Fig. 16; Pl. 8, Fig. 8.
1935. Stefanov & Jordanov, p. 68, Fig. 70.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***CHANEYA* Wang & Manchester – RUTACEAE**

***Chaneya oeningensis* (Unger) Teodoridis & Kvaček**

2005. Teodoridis & Kvaček, p. 98, Pl. 1, Figs 1-14; Pl. 2, Figs 1-15; Pl. 3, Figs 1-5; Fig.-text 3.
1847. *Getonia oeningensis* Unger, p. 140.
1932. *Porana oeningensis* (Unger) Heer; Konjarov, p. 54, Pl. 22, Fig. 5.
1998. Palamarev & al., p. 15.
1964b. *P. macrantha* Heer; Palamarev, p. 135, Pl. 1, Fig. 6.
1967. Palamarev, p. 97.
1988. Černjavska & al., p. 31.
2000. Bozukov, p. 27, Pl. 4, Fig. 2.
Material: Blossom impression.
Stratigraphic range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***CHENOPODIUM* L. – CHENOPODIACEAE**

***Chenopodium* aff. *album* L.**

1970. Palamarev, p. 43, Pl. 1, Figs 15-16.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Razlog (Razlog coalbearing formation, Lower Pontian – Lower Dacian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

***CHRYSOPHYLLUM* L. – SAPOTACEAE**

***Chrysophyllum atticum* Unger**

1867. Unger, p. 66, pars Pl. 11, Figs 12-13 (non Figs 14-15 = fruct. gen. & sp. indet.).
1987. Palamarev & Petkova, p. 104, Pl. 27, Fig. 5.
1967. *Dalbergia* sp., Petkova, p. 146, Pl. 13, Fig. 5, rev. & det. Palamarev & Petkova, 1987.
Material: Li.
Location and stratigraphical range: Pelovo, Stavertsi (Krivodol Formation, Volhynian); Vodnyantsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***CINNAMOMOPHYLLUM* Kräusel & Weyland – LAURACEAE**

Cinnamomophyllum lanceolatum (Unger) Hantke

1962. Kitanov & Palamarev, p. 7, Pl. 4, Fig. 1.
Rev. 1999a. *Daphnogene lanceolata* Unger; Palamarev & al., p. 31, Pl. 1, Fig. 5.

***CINNAMOMUM* Blume – LAURACEAE**

Cinnamomum cinnamomeum (Rossm.) Hollick

1984. Kitanov, p. 51, Pl. 6, Fig. 4.
Rev. 1987. *Daphnogene bilinica* (Unger) Kvaček & Knobloch; Palamarev & Petkova, p. 43, Pl. 8, Figs 3-4, 8-9.

Cinnamomum lanceolatum (Unger) Heer

1932. Konjarov, p. 54, Pl. 22, Fig. 2; p. 98, Pl. 27, Figs 10-11; Pl. 28, Fig. 1; p. 129, Pl. 43, Fig. 3; p. 222, Pl. 64, Figs 2-4; p. 239, Pl. 72, Figs 2-3.
1937. Konstantinov, p. 263, Pl. 3, Figs 7, 11-17.
1961. Palamarev, p. 183, Pl. 5, Fig. 3; Fig.-text 16.
1964a. Palamarev, p. 22, Pl. 5, Fig. 2.
1984. Kitanov, p. 51, Pl. 6.3.
Rev. 1999a. *Daphnogene lanceolata* Unger; Palamarev & al., p. 31, Pl. 1, Fig. 5.

Cinnamomum polymorphum A. Braun

1932. Konjarov, Pl. 21, Figs 3-5; Pl. 56, Fig. 7; Pl. 58, Fig. 2.
1935. Stefanov & Jordanov, p. 50, Pl. 17, Figs 6-8; Pl. 18, Figs 1-8; Fig.-text 47.
1937. Konstantinov, p. 265, Pl. 3, Fig. 6.
1951. Stefanov & Ganchev, p. 167, Fig. 1.
1961. Palamarev, p. 184, Fig.-text 17.
1962. Kitanov & Palamarev, p. 7, Pl. 4, Fig. 2.
1962. Hadžiev & Palamarev, p. 9.
1964. Palamarev, p. 21.
1966. Petkova & Kitanov, p. 11, Pl. 3, Fig. 3; Pl. 7, Fig. 1.
1967. Petkova, p. 157, Pl. 5, Figs 1-2.
1982. Kitanov, p. 37, Pl. 1, Fig. 3.

Rev. 1987. *Daphnogene bilinica* (Unger) Kvaček & Knobloch; Palamarev & Petkova, p. 43, Pl. 8, Figs 3-4, 8-9.

Cinnamomum rossmässleri Heer

1967. Petkova, p. 145, Pl. 5, Figs 3-4.
Rev. 1987. *Daphnogene cinnamomifolia* (Brongn.) Unger; Palamarev & Petkova, p. 42, Pl. 8, Figs 2, 6-7.

Cinnamomum scheuchzeri Heer

1932. Konjarov, p. 54, Pl. 21, Figs 1-2; p. 98, Pl. 28, Figs 2-3; p. 239, Pl. 72, Fig. 4.
1937. Konstantinov, p. 264, Pl. 3, Figs 8-10.
1961. Palamarev, Pl. 5, Fig. 4.
1964a. Palamarev, p. 21.
Rev. 1987. *Daphnogene bilinica* (Unger) Kvaček & Knobloch; Palamarev & Petkova, p. 43, Pl. 8, Figs 3-4, 8-9.

Cinnamomum cf. *sezanense* Watelet

1964a. Palamarev, p. 22, Fig.-text 6.1.
Rev. *Daphnogene bilinica* (Unger) Kvaček & Knobloch; Palamarev, hoc loco.

***Cinnamomum spectabile* Heer**

1856. Heer, p. 91, Pl. 96, Figs 1-8.
1932. Konjarov, p. 54, Pl. 22, Fig. 1.
1966. Palamarev & Petkova, p. 57.
Material: Li.
Location and stratigraphical range: Belitsa (sandstone and sandy-argillaceous formations, Lower Oligocene); Pernik (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

***Cinnamomum subrotundum* (A. Braun) Heer**

1856. Heer, p. 87, Pl. 91, Fig. 9d; Pl. 92, Fig. 5a; Pl. 93, Figs 18-24.
1932. Konjarov, p. 54, Pl. 22, Fig. 3.
1845. *Ceanothus subrotundus* A. Braun, p. 172.
Material: Li.
Location and stratigraphical range: Pernik (Coalbearing formation, Upper Oligocene).
Collection: Unkown.

***CIRCAEA* Raf. – ONAGRACEAE**

***Circaea macrocarpa* Dorof.**

1963. Dorofeev, p. 235, Pl. 42, Figs 46-49.
1989. Palamarev, p. 52, Pl. 3, Fig. 7.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***CIRSSIUM* Mill. – ASTERACEAE**

***Cirsium* aff. *palustre* (L.) Scop.**

1971. Palamarev, p. 160, Pl. 23, Fig. 6.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***CNEORUM* L. – CNEORACEAE**

***Cneorum tricoccum* L.**

1934. Stefanov & Jordanov, p. 25, Pl. 3, Fig. 13.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

COCCULUS DC. – MENISPERMACEAE

Cocculus (Macclintockia) kanii (Heer) Saporta & Marion

1988. Černjavska & al., p. 30, Pl. 1, Fig. 3.
Rev. *Macclintockia basinervis* (Rossm.) Knobloch; Bozukov, hoc loco.

Cocculus latifolius Saporta

1982. Kitanov, p. 37, Pl. 2, Fig. 1.
Rev. 1987. *Byttneriophyllum tiliaefolium* (A. Braun) Knobloch & Kvaček; Palamarev & Petkova, p. 106, Pl. 28, Figs 1, 4.

***COLUTEA* L. – FABACEAE**

***Colutea arborescens* L. foss.**

1972. Kitanov, p. 178, Pl. 3, Fig. 3.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Colutea salteri* Heer**

1859. Heer, p. 101, Pl. 132, Figs 47-57.
1999a. Palamarev & al., p. 36, Pl. 1 Fig. 8.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene);
Collection: IB (BAS).

COMPTONIA L'Hér. – MYRICACEAE

***Comptonia acutiloba* Brongn.**

1828. Brongniart, p. 140.
1987. Palamarev & Petkova, p. 82, Pl. 22, Figs 3a-b.
1998. Palamarev & al., p. 15.
1999b. Bozukov, p. 47, Pl. 3, Fig. 2.
1967. *C. peregrina* L.; Petkova, p. 139, Pl. 1, Fig. 11; Pl. 9, Figs 7a-b.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Koilovo, Pelovo, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).
Note: According to Kvaček (2004), the correct name for this species is *Comptonia difformis*.

Comptonia peregrina L.

1967. Petkova, p. 139, Pl. 1, Fig. 11; Pl. 9, Figs 7a-b.
Rev. 1987. *Comptonia acutiloba* Brongn.; Palamarev & Petkova, p. 82, Pl. 22, Figs 3a-3b.

***Comptonia schrankii* (Sternb.) Berry**

1906. Berry, p. 514.
1975. Palamarev & Petkova, p. 212, Pl. 2, Fig. 1.
1822. *Aspleniopteris schrankii* Sternb.; Sternberg, p. 2, Pl. 21.2.
Material: Li.
Location and stratigraphical range: Gyueshevo (Gyueshevo Formation, Upper Eocene).
Collection: IB (BAS).

CORIARIA L. – CORIARIACEAE

***Coriaria* sp. aff. *C. myrtifolia* L.**

1934. Stefanov & Jordanov, p. 28, Pl. 1, Fig. 7.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

CORNUS L. s. l. – CORNACEAE

Cornus buchii Heer

1967. Petkova, p. 145, Pl. 6, Fig. 10.
Rev. 1987. *Cornus graeffii* (Heer) Hantke; Palamarev & Petkova, p. 126, Pl. 32, Figs 3, 5.

***Cornus distans* Boulay**

1887. Boulay, p. 27.
1963b. Palamarev, p. 95.
1964b. Palamarev, p. 134, Pl. 9, Fig. 2.
1999b. Bozukov, p. 60, Pl. 6, Fig. 4.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Cornus gorbunovii* Dorof.**

1955. Dorofeev, p. 137, Pl. 6, Figs 13-16.
1982. Palamarev, p. 20, Pl. 6, Figs 6, 9, 11.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation Lower Pontian).
Collection: IB (BAS).

***Cornus graeffii* (Heer) Hantke**

1954. Hantke, p. 79, Pl. 44, Figs 1-3.
1987. Palamarev & Petkova, p. 126, Pl. 32, Figs 3-5.
1967. *C. buchii* Heer; Petkova, p. 145, Pl. 6, Fig. 10.
1859. *Rhamnus graeffii* Heer, p. 79, Pl. 126, Fig. 4.
Material: Li.
Location and stratigraphical range: Pelovo, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Cornus mas* L. foss.**

1984. Kitanov, p. 65, Pl. 14.2.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Cornus megaphylla* Hu & Chaney**

1938. Hu & Chaney, p. 71, Pl. 48, Figs 3-6; Pl. 49, Fig. 2.
1987. Palamarev & Petkova, p. 127, Pl. 32, Figs 1a-1b.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Cornus orbifera* Heer**

1859. Heer, p. 27, Pl. 105, Figs 15-17.
1964a. Palamarev, p. 31, Fig.-text 43.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

CORYLOPSIS Siebold & Zucc. – HAMAMELIDACEAE

***Corylopsis* aff. *willmottiae* Rehder**

1987. Palamarev & Petkova, p. 51, Pl. 14, Fig. 2.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Corylopsis palaeorhodopensis* Palam.**

1994b. Palamarev, p. 25, Pl. 3, Figs 2, 4.
Holotypus: Pl. 3, Fig. 2, Palamarev (1994b).
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

CORYLUS L. – BETULACEAE

***Corylus avelana* L. foss.**

1960. Kitanov, p. 370, Pl. 1, Fig. 2.
1984. Kitanov, p. 56, Fig. 9.6.
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Sofia (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Corylus insignis* Heer**

1856. Heer, p. 43, Pl. 73, Figs 11-17.
1984. Kitanov, p. 56, Fig. 10.3.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

COTINUS Mill. – ANACARDIACEAE

Cotinus coggygria (L.) Scop.

1982. Kitanov, p. 37.
1984. Kitanov, p. 65, Fig. 12.6.
Rev. 1987. *Cotinus orbiculatus* (Heer) Budantzev; Palamarev & Petkova, p. 120, Pl. 30, Fig. 4.

***Cotinus orbiculatus* (Heer) Budantzev**

1959. Budantzev, p. 239.
1987. Palamarev & Petkova, p. 120, Pl. 30, Fig. 4.
1999. *C. orbiculatus* (Heer) Budantzev var. *microphyllus* Palam., Kitan. fil. & Bozukov; Palamarev & al., p. 38, Pl. 3, Fig. 5.
1929. *C. coggygria* Scop.; Stojanoff & Stefanoff, p. 79, Pl. 12, Fig. 11; Figs-text 21.3-4.
1984. *C. coggygria* Scop. foss.; Kitanov, p. 65, Fig. 12: 6.
1859. *Rhus orbiculata* Heer, p. 82, Pl. 127, Fig. 9.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Pelovo (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

CRATAEGUS L. – ROSACEAE

***Crataegus integrifolia* Palam.**

1966. Palamarev in Palamarev & Petkova, p. 61, Pl. 5, Figs 1b, 4; Fig.-text 9.
Holotypus: Pl. 5, Fig. 4, Palamarev & Petkova (1966).
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CUDRANIA Trécul – MORACEAE

***Cudrania* aff. *tricuspidata* (Carrière) Bureau**

1968. Palamarev, p. 202, Pl. 40, Fig. 9; Fig.-text 3.
Material: Ca.
Location and stratigraphical range: Gabare, Krivodol (Krivodol Formation, Volhynian).
Collection: IB (BAS).

CUNONIA L. – CUNONIACEAE

"Cunonia" formosa Friedrich

1883. Friedrich, p. 226, Pl. 7, Figs 6-9; Pl. 29, Figs 8-9.
1963b. Palamarev, p. 81, Pl. 3, Fig. 32.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Cunoniaceae* is questionable.

"Cunonia" oligocaenica Andr. & Novak

1957. Andreánszky & Novak, p. 47, Pl. 2, Fig. 5.
1964b. Palamarev, p. 131, Pl. 4, Figs 2, 4; Pl. 5, Fig. 1.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to fam. *Cunoniaceae* is questionable.

CUPANIA L. – SAPINDACEAE

Cupania cf. *angustifolia* Andr. & Novak

1964b. Palamarev, p. 134, Pl. 9, Fig. 1.
Rev. *Sapindus cupanioides* Ettingsh.; Palamarev, hoc loco.

Cupania sp.

1963b. Palamarev, p. 81, Pl. 3, Fig. 31.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

CYCLOBALANOPSIS Oerst. – FAGACEAE

Cyclobalanopsis glaucoides Schottky foss.

1967. Palamarev, p. 93.
Rev. *Cyclobalanopsis stojanovii* Palam. & Kitan. fil.; Palamarev, hoc loco.

Cyclobalanopsis aff. *C. glaucoides* Schottky

1963b. Palamarev, p. 73, Pl. 1, Figs 11a-b.
Rev. 1988. *Cyclobalanopsis stojanovii* Palam. & Kitan. fil.; Palamarev & Kitanov, p. 191, Pl. 9, Figs 1-2, 5; Pl. 10, Fig. 1; Fig.-text 3.

Cyclobalanopsis kryshtofovichii Kolak.

1952. Kolakovsky, p. 127, Fig. 2.
1964b. Palamarev, p. 130, Pl. 1, Fig. 1; Pl. 2, Fig. 4.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Cyclobalanopsis stojanovii Palam. & Kitan. fil. (Plate II, Fig. 4).

1988. Palamarev & Kitanov, p. 191, Pl. 9, Figs 1-2, 5; Pl. 10, Fig. 1; Fig.-text 3.
1963b. *Cyclobalanopsis* aff. *C. glaucoides* Schottky; Palamarev, p. 73, Pl. 1, Figs 11a-b.
1967. *C. glaucoides* Schottky foss.; Palamarev, p. 93.
Holotypus: Pl. 9, Fig. 1; Pl. 10, Fig. 1, (N B-417), Palamarev & Kitanov (1988).
Material: Cu, Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

CYCLOCARYA Iljinsk. – JUGLANDACEAE

Cyclocarya nucifera (Ludw.) Mai

1964. Mai, p. 20, Pl. 3, Figs 3-5.
1994b. Palamarev, p. 27, Pl. 1, Fig. 7.
1857. *Ziziphus nucifera* Ludw.; Ludwig, p. 102, Pl. 20, Fig. 23.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

CYDONIA Mill. – ROSACEAE

Cydonia oblonga Mill.

1956. Kitanov & Nikolova, p. 104, Pl. 7, Fig. 1; Fig.-text 17.
1935. *C. vulgaris* Pers.; Stefanov & Jordanov, p. 57, Pl. 20, Fig. 4; Fig.-text 54.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian –

Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

Cydonia vulgaris Pers.

1935. Stefanov & Jordanov, p. 57, Pl. 20, Fig. 4; Fig.-text 54.
Rev. 1956. *Cydonia oblonga* Mill.; Kitanov & Nikolova, p. 104, Pl. 7, Fig. 1; Fig.-text 17.

CYRILLA Gardner ex L. – CYRILLACEAE

***Cyrilla thomsonii* Kräusel & Weyland**

1954. Kräusel & Weyland, p. 151, Pl. 32, Fig. 6; Pl. 33, Fig. 1; Fig.-text 20.
1987. Palamarev & Petkova, p. 100, Pl. 27, Figs 2, 4, 6-7.
Material: Cu, Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

DALBERGIA L. – FABACEAE

***Dalbergia bella* Heer**

1859. Heer, p. 104, Pl. 133, Figs 14-19.
1999a. Palamarev & al., p. 35, Pl. 4, Fig. 7.
1999b. Palamarev & al., p. 17, Pl. 6, Fig. 9.
1999b. *Dalbergia* cf. *bella* Heer; Bozukov, p. 54, Pl. 5, Fig. 1.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Dalbergia rectinervis* Ettingsh.**

1869. Ettingshausen, p. 223, Pl. 55, Fig. 14.
1999a. Palamarev & al., p. 35, Pl. 1, Fig. 13.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

Dalbergia sp.

1967. Petkova, p. 145, Pl. 6, Fig. 8; Pl. 13, Fig. 5.
Rev. 1987. *Chrysophyllum atticum* Unger; Palamarev & Petkova, p. 104, Pl. 27, Fig. 5.

DAPHNE L. – THYMELAEACEAE

Daphne cf. *caucasica* Pall.

1970. Palamarev, p. 46, Pl. 2, Figs 12-13.
Rev. 1994a. *Daphne schweitzeri* Palam.; Palamarev, p. 141, Pl. 2, Figs 13-15.

***Daphne* cf. *giraldii* Nitsche foss.**

1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Daphne kimmerica* Kolak.**

1960. Kolakovsky, p. 48, Pl. 11, Fig. 3.
1987. Palamarev & Petkova, p. 107, Pl. 28, Fig. 5.
1967. *Daphne laureola* L. foss.; Petkova, p. 149, Pl. 7, Fig. 9.
Material: Li.
Location and stratigraphical range: Brashlyanitsa, Pelovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Daphne laureola L.

1935. Stefanov & Jordanov, p. 66, Pl. 23, Figs 1-2; Fig.-text 67.
Rev. 1988. *Daphne minima* Kolak.; Palamarev & Kitanov, p. 194, Pl. 11, Fig. 3.

Daphne laureola L. foss.

1967. Petkova, p. 149, Pl. 7, Fig. 9.
Rev. 1987. *Daphne kimmerica* Kolak.; Palamarev & Petkova, p. 107, Pl. 28, Fig. 5.

***Daphne mezereum* L.**

1935. Stefanov & Jordanov, p. 67, Pl. 23, Fig. 3; Fig.-text 68.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Daphne minima* Kolak.**

1976. Kolakovsky in Kolakovsky & Schakryl, p. 141, Pl. 21, Fig. 6.
1988. Palamarev & Kitanov, p. 194, Pl. 11, Fig. 3.
1935. *Daphne laureola* auct. non L.; Stefanov & Jordanov, p. 66, Pl. 23, Figs 1-2; Fig.-text 67.

Material: Li.

Location and stratigraphical range: Beli Breg coal basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).

Collection: IB (BAS).

***Daphne schweitzeri* Palam.**

1994a. Palamarev, p. 141, Pl. 2, Figs 13-15.
1970. *Daphne* cf. *caucasica* Pall.; Palamarev, p. 46, Pl. 2, Figs 12-13.

Holotypus: Pl. 2, Fig. 13, Palamarev (1994a).

Material: Ca.

Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Pontian); Ognyanovo (Baldevo Formation, Lower Pontian – Lower Dacian).

Collection: IB (BAS).

***DAPHNOGENE* Unger – LAURACEAE**

***Daphnogene bilinica* (Unger) Kvaček & Knobloch**

1967. Kvaček & Knobloch, p. 203.
1987. Palamarev & Petkova, p. 43, Pl. 8, Figs 3-4, 8-9.
1998. Palamarev & al., pp. 14-15.
1998b. Bozukov, p. 4, Pl. 4, Figs 1-2.
1847. *Ceanothus bilinicus* Unger, p. 145, Pl. 49, Fig. 9.
1932. *Cinnamomum scheuchzeri* Heer; Konjarov, p. 54, Pl. 21, Figs 1-2; p. 98, Pl. 28, Figs 2-3; p. 239, Pl. 72, Fig. 4.
1937. Konstantinov, p. 246, Pl. 3, Figs 8-10.
1961. Palmarev, p. 184, Pl. 5, Fig. 4.
1964a. Palamarev, p. 21.
1932. *C. polymorphum* A. Braun; Konjarov, p. 54, Pl. 21, Figs 3-5; p. 98, Pl. 28, Figs 5-6; p. 167, Pl. 56, Fig. 7; p. 173, Pl. 58, Fig. 2.
1935. Stefanov & Jordanov, p. 50, Pl. 17, Figs 6-8; Pl. 18, Figs 1-8; Fig.-text 47.
1937. Konstantinov, p. 265, Pl. 3, Fig. 6.
1951. Stefanov & Ganchev, p. 167, Fig. 1.
1961. Palamarev, p. 184, Fig.-text 17.
1962. Kitanov & Palamarev, p. 7, Pl. 4, Fig. 2.
1962. Hadžiev & Palamarev, p. 9.
1964a. Palamarev, p. 21.
1966. Petkova & Kitanov, p. 11, Pl. 3, Fig. 3; Pl. 7, Fig. 1.
1967. Petkova, p. 145, Pl. 5, Figs 1-2.
1964a. *Cinnamomum* cf. *sezanense* Watelet; Palamarev, p. 22, Fig.-text 6.1.
1984. *C. cinnamomeum* (Rossm.) Hollik; Kitanov, p. 51, Fig. 6.4.

Material: Li.

Location and stratigraphical range: Smolyan (Smolyan Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation – Middle Miocene); Byala Rada, Krivodol, Montana, Pelovo, Rouzhintsi, Shishmanovo, Staverci, Studeno Buche, Tolovitsa (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).

Collection: IB (BAS).

***Daphnogene cinnamomea* (Rossm.) Knobloch**

1968. Knobloch, p. 139, Pl. 2, Fig. 6, Pl. 4, Fig. 2.
1995. Palamarev & Staneva, p. 117.
1999a. Palamarev & al., p. 30.
1999b. Palamarev & al., p. 9, Pl. 1, Fig. 6; Pl. 2, Figs 1-2.
2001. Palamarev & al., p. 281, Pl. 2, Fig. 7.
1840. *Phyllites cinnamomeus* Rossm.; Rossmässler, p. 23, Pl. 1, Figs 1-8.

Material: Li.

Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).

Collection: IB (BAS).

***Daphnogene cinnamomifolia* (Brongn.) Unger**

1845. Unger, p. 227.
1987. Palamarev & Petkova, p. 42, Pl. 8, Figs 2, 6-7.
1988. Černjavska & al., p. 30, Pl. 2, Fig. 3.
1998. Palamarev & al., pp. 15, 19.
1998b. Bozukov, p. 4, Pl. 5, Fig. 4.
1999a. Palamarev & al., p. 30, Pl. 1, Fig. 6; Pl. 4, Fig. 10.

1822. *Phyllites cinnamomifolia* Brongn.; Brongniart in Cuvier, p. 617, Pl. 2, Fig. 12.
1967. *Cinnamomum rossmässleri* Heer; Petkova, p. 145, Pl. 5, Figs 3-4.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation – Middle Miocene); Kladoroub-Ostrokaptsi, Rouzhintsi, Pelovo, Slavyanovo, Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Daphnogene elegans Watelet

1866. Watelet, p. 180, Pl. 51, Figs 5-6.
1956. Baikovskaja, p. 405, Pl. 1, Fig. 3.
Material: Li.
Location and stratigraphical range: Pchelarovo (Sandy argillaceous formation, Upper Eocene).
Collection: Unkown.
Note: The exact locality is unkown, we suggest that is Pchelarovo.

Daphnogene cf. *kutschlinica* Ettingsh.

1998b. Bozukov, p. 4, Pl. 1, Fig. 1.
1868. *D. kutschlinica* Ettingsh.; Ettingshausen, p. 52, Pl. 34, Fig. 12.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation – Middle Miocene).
Collection: IB (BAS).

Daphnogene lanceolata Unger

1850a. Unger, p. 167, Pl. 37, Figs 1-7.
1988. Černjavska & al., p. 3, Pl. 3, Fig. 1.
1995. Palamarev & Staneva, p. 117, Pl. 1, Fig. 2.
1998. Palamarev & al., pp. 14-15.
1998b. Bozukov, p. 5, Pl. 4, Fig. 3.
1999a. Palamarev & al., p. 31, Pl. 1, Fig. 5.
1999b. Palamarev & al., p. 9, Pl. 2, Figs 7-8.
2001. Palamarev & al., p. 281, Pl. 1, Fig. 1.
1932. *Cinnamomum lanceolatum* (Unger) Heer; Konjarov, p. 54, Pl. 22, Fig. 2; p. 98, Pl. 27, Figs 10-11; Pl. 28, Fig. 1; p. 129, Pl. 43, Fig. 3; p. 222, Pl. 64, Figs 2-4; p. 239, Pl. 72, Figs 2-3.
1937. Konstantinov, p. 263, Pl. 3, Figs 7, 11-17.
1961. Palamarev, p. 183, Pl. 5, Fig. 3; Fig.-text 16.
1964a. Palamarev, p. 22, Pl. 5, Fig. 2.
1962. *Cinnamomophyllum lanceolatum* (Unger) Hantke; Kitanov & Palamarev, p. 7, Pl. 4, Fig. 1.
1984. Kitanov, p. 51, Pl. 6.3.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Smolyan (Smolyan Formation, Lower Oligocene); West Maritsa basin – Merichleri (Merichleri limestone Formation, Oligocene); Bobovdol, Borovets, Pernik (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation – Middle Miocene); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Daphnogene rhodopaea Palam. (Plate IV, Fig. 3).

1975. Palamarev in Palamarev & Petkova, p. 209, Pl. 1, Figs 2-3; Pl. 4, Figs 4-5, 10.
1995. Palamarev & Staneva, p. 117.
2001. Palamarev & al., p. 281.
Holotypus: Pl. 4, Fig. 4, (N Br-220a), Palamarev & Petkova (1975).
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Braikovitsa (Luki Formation, Lower Oligocene).
Collection: IB (BAS).

Daphnogene spectabilis (Heer) Knobloch

1968. Knobloch, p. 139, Pl. 4, Fig. 3; Pl. 5, Fig. 9.
1995. Palamarev & Staneva, p. 117.
1856. *Cinnamomum spectabile* Heer, p. 91, Pl. 96, Figs 1-8.
Material: Li.

Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Daphnogene ungeri* Heer**

1856. Heer, p. 92, Pl. 96, Figs 9-13.
1998b. Bozukov, p. 5, Pl. 1, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation – Middle Miocene);
Collection: IB (BAS).

DECODON J. F. Gmel. – LYTHRACEAE

***Decodon globosus* (E. Reid) P. Nikitin**

1929. Nikitin, p. 589, Figs 1.3, 5, 7.
1970. Palamarev, p. 48, Pl. 3, Fig. 16.
1982. Palamarev, p. 18, Pl. 5, Figs 6-7.
1923. *Diclidocarya globosa* E. Reid, p. 352, Pl. 11, Fig. 20.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

***Decodon triangularis* Palam.**

1987. Palamarev in Palamarev & Petkova, p. 118, Pl. 30, Fig. 5.
Holotypus: Pl. 30, Fig. 5, Palamarev & Petkova (1987).
Material: Ca.
Location and stratigraphical range: Drenovets (Krivodol Formation, Bessarabian); Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

DESMODIUM Desv. – FABACEAE

***Desmodium oligocaenicum* Petrescu, Givul. & Barbu**

1997. Petrescu & al., p. 73, Pl. 7, Figs 1-5; Pl. 24, Figs 8-9; Pl. 25, Figs 2, 9; Pl. 29, Figs 5, 8; Pl. 31, Fig. 10; Pl. 32, Figs 4-5.
1999a. Palamarev & al., p. 35, Pl. 3, Fig. 4.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

DEWALQUEA Saporta & Marion – ARALIACEAE

***Dewalquea fraxinifolia* T. Johnson & Gilmore**

1921. Johnson & Gilmore, p. 325, Pl. 11, Figs 1-3; Pl. 12, Figs 1-2, 5, 11.
1988. Černjavska & al., p. 31, Pl. 3, Fig. 4.
1995. Palamarev & Staneva, p. 115, Pl. 3, Figs 1, 6-7, 9.
1999b. Palamarev & al., p. 20, Pl. 7, Fig. 3; Pl. 8, Fig. 2; Pl. 10, Fig. 2.
1921. *D. hibernica* T. Johnson & Gilmore, p. 327, Pl. 4, Fig. 31; Pl. 12, Fig. 3.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Hvoina, Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).
Note: According to Walther (in Walther & Mai 1985), this species belongs to *Platanus*.

DIANTHUS L. – CARYOPHYLLACEAE

***Dianthus* aff. *giganteus* d'Urv.**

1994a. Palamarev, p. 140, pl 2, Fig. 12; Pl. 3, Fig. 1.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, UpperPontian).
Collection: IB (BAS).

DICLIDOCARYA P. Nikitin – LYTHRACEAE

Diclidocarya menzelii E. Reid

1970. Palamarev, p. 49, Pl. 3, Figs 8-11.
1971. Palamarev, p. 154.
Rev. 1989. *Microdiptera menzelii* (E. Reid) Mai; Palamarev, p. 52.

DIOSPYROS L. – EBENACEAE

***Diospyros anceps* Heer**

1859. Heer, p. 12, Pl. 102, Figs 15-18.
1987. Palamarev & Petkova, p. 102, Pl. 27, Fig. 1.
1995. Palamarev & Staneva, p. 118, Pl. 2, Fig. 3.
1998. Palamarev & al., p. 15.

1964a. *D. brachysepala* A. Braun; Palamarev, p. 32.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Belo Pole, Koshava (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Diospyros brachysepala A. Braun

1964a. Palamarev, p. 32.
Rev. 1987. *Diospyros anceps* Heer; Palamarev & Petkova, p. 102, Pl. 27, Fig. 1.

Diospyros lotoides Unger

1866. Unger, p. 30, Pl. 10, Figs 1-12.
1956. Baikovskaja, p. 406, Pl. 1, Fig. 4.
Material: Li.
Location and stratigraphical range: Pchelarovo (Sandy argillaceous formation, Upper Eocene).
Collection: Unkown.
Note: The exact locality is unkown, we suggest that it is Pchelarovo.

Diospyros lotus L.

1934. Stefanov & Jordanov, p. 33, Pl. 1, Fig. 11.
1935. Stefanov & Jordanov, p. 73, Pl. 24, Fig. 6; Fig.-text 79.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

DISTYLIUM Siebold & Zucc. – HAMAMELIDACEAE

Distylium fergusonii Knobloch & Kvaček

1976. Knobloch & Kvaček, p. 45, Pl. 22, Figs 3-8; Fig.-text 18.
1995b. Uzunova, p. 4, Pl. 1, Figs 6-7.
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

DODONAEA Mill. – SAPINDACEAE

Dodonaea cf. *pteleaefolia* Heer

1855. Heer, p. 64, Pl. 121, Figs 9-12.
1962b. Palamarev, p. 18, Fig. 2b.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Upper Oligocene).
Collection: IB (BAS).

Dodonaea salicoides Andr. var. *multinervis* Palam. (Plate I, Fig. 6).

1963b. Palamarev, p. 80, Pl. 3, Fig. 30.
1966. Palamarev & Petkova, p. 56.
1967. Palamarev, p. 95.
Holotypus: Pl. 3, Fig. 30, (N B-1504), Palamarev (1963b).
Material: Li.
Location and stratigraphical range: Belitsa (sandstone and sandy-argillaceous formations, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

DRYOPHYLLUM Debey – FAGACEAE

Dryophyllum curticellense (Watelet) Saporta & Marion

1873. Saporta & Marion, p. 42, Pl. 1, Fig. 5; Pl. 5, Figs 1-2.
1995. Palamarev & Staneva, p. 118.
1998. Palamarev & Mai, p. 241, Pl. 5, Figs 11-12, Pl. 2.
1999a. Palamarev & al., p. 32, Pl. 2, Figs 3-4.
2001. Palamarev & al., p. 284, Pl. 4, Figs 1-2.
1866. *Myrica curticellense* Watelet, p. 12, Pl. 34, Figs 1-3.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

Dryophyllum dewalquei Saporta & Marion

1873. Saporta & Marion, p. 37, Pl. 2, Figs 1-6; Pl. 3, Figs 1-4; Pl. 4, Fig. 1-4.
1966. Palamarev & Petkova, p. 53, Pl. 1, Fig. 1; Fig.-text 3.

1975. Palamarev & Petkova, p. 220, Pl. 7, Fig. 3.
1988. Černjavska & al., p. 30, Pl. 2, Fig. 1.
1998. Palamarev & Mai, p. 239, Pl. 7, Figs 4-7.
1999b. Palamarev & al., p. 13, Pl. 4, Fig. 3.
2001. Palamarev & al., p. 286, Pl. 5, Fig. 1.
Material: Li.
Location and stratigraphical range: Bulgarovo (Coalbearing formation, Priabonian); Dolno Selo (Dolnoselo Formation, Upper Eocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Mougla, Orehovo, Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Smolyan (Smolyan Formation, Upper Eocene – Lower Oligocene); Belitsa (Sandstone and sandy-argillaceous formations, Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Devin, Selcha (Devin Formation, Lower Oligocene); West Maritsa basin – Merichleri (Merichleri limnestone Formation, Oligocene).
Collection: IB (BAS).

Dryophyllum furcinerve (Rossm.) Schmalh.

1988. Černjavska & al., p. 30, Pl. 2, Fig. 2.
1995. Palamarev & Staneva, p. 118.
Rev. 1998. *Eotrigonobalanus furcinervis* (Rossm.) H. Walther & Kvaček; Palamarev & Mai, p. 243.

***Dryophyllum intermedium* (Friedrich) Palam. & Mai**

1998. Palamarev & Mai, p. 241, Pl. 6, Figs 3-4; Pl. 11, Figs 1-4.
1999b. Palamarev & al., p. 13, Pl. 4, Fig. 1; Pl. 7, Fig. 5.
1883. *Quercus intermedia* Friedrich, p. 222, Pl. 29, Figs 2-5.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Dryophyllum* cf. *moselense* Eb. Fisch.**

1950. Fischer, p. 11, Pl. 1, Figs 16-17.
1998. Palamarev & Mai, p. 242, Pl. 6, Figs 7-8.
2001. Palamarev & al., p. 284, Pl. 1, Fig. 7; Pl. 3, Fig. 1.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene); Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

ECHITONIUM Unger – APOCYNACEAE

Echitonium sophiae C.O. Weber

1932. Konjarov, p. 129, Pl. 43, Figs 2-2a; Fig.-text 4.
1961. Palamarev, p. 189, Pl. 8, Fig. 2; Figs-text 26a-b.
1964a. Palamarev, p. 32.
1967. Palamarev, p. 97.
1967. Petkova, p. 149, Pl. 13, Fig. 9.
1987. Palamarev & Petkova, p. 156, Pl. 39, Fig. 7.
Rev. 1994. *Thevetia sophiae* (C.O. Weber) Palam. & Petkova; Palamarev & Petkova, p. 41, Pl. 1, Fig. 5; Pl. 2; Figs 1-2, 4.

ELAEODENDRON J. Jacq. – CELASTRACEAE

***"Elaeodendron" cf. obovatum* Andr. & Novak**

1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Elaeodendron* is questionable, because that genus is included to genus *Cassine* s.l., and it is nessesary a wider revision.

ENGELHARDIA Lesch. ex Blume – JUGLANDACEAE

***Engelhardia macroptera* (Brongn.) Unger**

1866. Unger, p. 52, Pl. 16, Figs 9-11.
1966. Palamarev & Petkova, p. 66.
1967. Petkova, p. 139, Pl. 2, Fig. 7.
1982. Palamarev, p. 15, Pl. 5, Figs 1-2.
1987. Palamarev & Petkova, p. 90, Pl. 24, Figs 4-7.
1988. Černjavska & al., p. 30, Pl. 3, Fig. 5.
1989. Palamarev, p. 49, Pl. 4, Fig. 3.
1998. Palamarev & al., p. 15.
1999b. Bozukov, p. 48, Pl. 2, Fig. 4.
2001. Palamarev & al., p. 288, Pl. 3, Fig. 4.
1828. *Carpinus macroptera* Brongn.; Brongniart, p. 48, Pl. 3, Fig. 6.
Material: Ca.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Koilovtsi, Pelovo, Rouzhintsi, Stavertsi (Krivodol Formation,

Volhynian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

Engelhardia orsbergensis (P. Wessel & C.O. Weber) Jähnichen, Mai & H. Walther

1977. Jähnichen & al., p. 326, Pl. 38, Figs 1-4; Pl. 39, Figs 1-7; Pl. 40, Figs 1-6; Pl. 41, Figs 1-6; Pl. 42, Figs 1-7; Pl. 43, Figs 1-4; Pl. 44, Figs 1-7; Pl. 45, Figs 1-7; Pl. 46, Figs 1-7; Pl. 47, Figs 1-6; Pl. 48, Figs 1-4; Pl. 49, Figs 1, 5.
1987. Palamarev & Petkova, p. 88, Pl. 24, Figs 1-3, 8.
1995. Palamarev & Staneva, p. 118, Pl. 3, Fig. 3.
1998. Palamarev & al., pp. 15, 19.
2001. Palamarev & al., p. 288.
1856. *Banksia orsbergensis* P. Wessel & C.O. Weber, p. 146, Pl. 25, Fig. 9a.
1963a. *Rhus juglandogene* Ettingsh.; Palamarev, p. 211, Fig. 8.
1967. Palamarev, p. 95.
1963b. *Myrica concinna* Heer; Palamarev, p. 71, Pl. 1, Fig. 6.
1966. *M. lignitum* (Unger) Saporta; Petkova & Kitanov, p. 6, Pl. 1, Figs 4, 7.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Brezhani (Goreshtiska Formation, Lower Oligocene); Kladoroub-Ostrokaptsi, Krivodol, Pelovo, Rouzhintsi, Shishmanovo, Smirnenski, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

EOTRIGONOBALANUS H. Walther & Kvaček – FAGACEAE

Eotrigonobalanus furcinervis (Rossm.) H. Walther & Kvaček

1989. Walther & Kvaček in Kvaček & Walther, p. 581, pars Pl. 33, Figs 1-6; Pl. 34, Figs 1-6; Pl. 35, Figs 1-7; Pl. 36, Figs 1-4; Pl. 39, Figs 1-4; Pl. 40, Figs 1-6; Pl. 41, Figs 1-4; Pl. 42, Figs 1-4; Pl. 43, Figs 1-6; Pl. 44, Figs 1-4; Pl. 45, Figs 1-4; Pl. 46, Figs 1-4 (non Pl. 47, Figs 1-3 = *Quercus lyellii* Heer).
1998. Palamarev & Mai, p. 243, Pl. 9, Figs 5-7.
1998. Palamarev & al., pp. 15, 19.
1999a. Palamarev & al., p. 32, Pl. 2, Figs 1-2, 9.
1999b. Palamarev & al., p. 13, Pl. 3, Fig. 6; Pl. 5, Figs 1-2.
2001. Palamarev & al., p. 286, Pl. 1, Figs 2-3, 5; Pl. 2, Fig. 2; Pl. 3, Fig. 3; Pl. 5, Fig. 2.
1840. *Phyllites furcinervis* Rossm.; Rossmässler, p. 33, Pl. 6, Fig. 25; Pl. 7, Fig. 26-31.
1932. *Quercus furcinervis* (Rossm.) Unger; Konjarov, p. 129, Pl. 42, Figs 1-4; Pl. 46, Figs 1-3.
1962b. *Castanopsis furcinervis* (Rossm.) Kräusel & Weyland; Palamarev, p. 161, Pl. 1, Figs 1, 3; Pl. 2, Figs 1, 3-4; Pl. 3, Figs 1-5; Figs-text 1-2.
1966. Palamarev & Petkova, p. 57.
1975. Palamarev & Petkova, p. 219, Pl. 7, Fig. 1.
1988. *Dryophyllum furcinerve* (Rossm.) Schmalh.; Černjavska & al., p. 30.
1995. Palamarev & Staneva, p. 118.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Logodash (Logodash Formation, Priabonian); Barutin (Barutin Formation, Upper Eocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Smolyan (Smoyan Formation, Upper Eocene – Lower Oligocene); Gabrovo (Fine-graned sandstone lyers, Priabonian – Lower Oligocene); Vaksevo (Unpointed stratigraphic unit, Oligocene); Belitsa (Sandstone and sandy-argillaceous formations, Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Braikovitsa (Luki Formation, Lower Oligocene); Gozdyuvska Mahala (Gozdevitsa sandy-conglomerate Formation, Lower Oligocene); Devin, Selcha (Devin Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); West Maritsa basin – Merichleri (Merichleri limestone Formation, Oligocene);
Collection: IB (BAS).

EPACRIDICARPUM Chandler – EPACRIDACEAE

Epacridicarpum headonense Chandler

1960. Chandler, p. 234, Pl. 34, Fig. 146.
1973. Palamarev, p. 85, Pl. 2, Figs 17-18.

Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

EUCALYPTUS L'Hér. – MYRTACEAE

***"Eucalyptus" oceanica* Unger**

1850b. Unger, p. 52, Pl. 36, Figs 1-13.
1932. Konjarov, p. 129, Figs 5-5a.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Dospei (Bituminous schist formation, Upper Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Eucalyptus* is questionable.

EUCOMMIA Oliv. – EUCOMMIACEAE

***Eucommia* cf. *caucasica* Dorof.**

1974c. Dorofeev, p. 155, Pl. 124, Figs 7-11.
1987. Palamarev & Petkova, p. 55, Pl. 14, Fig. 5.
Material: Ca.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Eucommia palaeoulmoides* Baikovskaja**

1965. Baikovskaja in Kryshtofovich & Baikovskaja, p. 75, Pl. 19, Fig. 6.
1987. Palamarev & Petkova, p. 54, Pl. 15, Figs 4a-4b.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

EUGENIA L. – MYRTACEAE

***Eugenia splendens* Petrescu, G. Margarit & M. Margarit**

1976. Petrescu & al., p. 211, Pl. 2, Fig. 7; Pl. 8, Figs 1-3, 6.
1994. Palamarev & Petkova, p. 35, Pl. 1, Fig. 3; Pl. 3, Fig. 5.
Material: Li.
Location and stratigraphical range: Orehovo, Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Suhostrel (Suhostrel Formation, Priabonian).
Collection: IB (BAS).

EUPHORBIA L. – EUPHORBIACEAE

***Euphorbia* aff. *helioscopia* L.**

1994a. Palamarev, p. 141, Pl. 3, Fig. 6.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

EURYA Thunb. – THEACEAE

***Eurya* aff. *acuminatissima* Merr. & Chun**

1995. Bozukov & Palamarev, p. 176, Fig. 5.
1999b. Bozukov, p. 49.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Eurya angularis* Palam.**

1987. Palamarev in Palamarev & Petkova, p. 92, Pl. 25, Figs 2-3.
Holotypus: Pl. 25, Figs 2-3, Palamarev & Petkova (1987).
Material: Ca.
Location and stratigraphical range: Slavotin (Krivodol Formation, Volhynian); Drenovets, Hairedin (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Eurya stigmosa* (Ludw.) Mai**

1960. Mai, p. 79, Pl. 4, Figs 8-17; Fig.-text 4.
1971. Palamarev, p. 156, Pl. 22, Figs 8-10.
1987. Palamarev & Petkova, p. 92, Pl. 25, Fig. 5.
1994b. Palamarev, p. 27, Pl. 3, Figs 7-8.
1860. *Potamogeton stigmosus* Ludw.; Ludwig, p. 60, Pl. 8, Fig. 13.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene); Drenovets, Gabrovnitsa (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

EURYALE Salisb. – NYMPHAEACEAE

Euryale ex gr. *europaea* C. & E. Reid

1970. Palamarev, p. 40, Pl. 2, Figs 2-3.
Rev. 1982. *Pseudoeuryale europaea* (C.O. Weber) Dorof.; Palamarev, p. 10, Pl. 3, Fig. 3.

***FAGUS* L. – FAGACEAE**

Fagus attenuata Göpp.

1929. Stojanoff & Stefanoff, p. 44, Pl. 5, Figs 9-10; Figs-text 11.1-2.
Rev.: *Fagus silesiaca* H. Walther & Zastawniak; Palamarev, hoc loco.

Fagus ferruginea Aiton foss.

1967. Petkova, p. 142, Pl. 3, Fig. 7; Pl. 11, Fig. 3.
Rev. 1987. *Fagus pristina* Saporta; Palamarev & Petkova, p. 62, Pl. 17, Figs 1a-b, 3-4.

***Fagus decurrens* C. & E. Reid**

1915. Reid & Reid, p. 78, Pl. 78, Figs 19-20, 22-28.
1997. Mai & Palamarev, p. 484, Pl. 1, Figs 3-5.
Material: Ca.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

***Fagus longipetiolata* Seem. foss.**

1984. Kitanov, p. 58, Figs 11.3-4.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Fagus orientalis* Lipsky**

1934. Stefanov & Jordanov, p. 16.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Fagus orientalis Lipsky

1935. Stefanov & Jordanov, p. 36, Pl. 7, Figs 6-7; Pl. 9, Figs 2-5; Fig.-text 37.
1984. Kitanov, p. 6, Fig. 11.2.
Rev. 1987. *Fagus pliocaenica* Saporta; Palamarev & Petkova, p. 63, Pl. 17, Fig. 7.

***Fagus pliocenica* Saporta**

1884. Saporta, p. 88, pars Pl. 6, Fig. 5 (non Figs 1-4, 6 = *Fagus attenuata* Goepp.)
1932. Konjarov, Pl. 8, Fig. 8.
1964a. Palamarev, p. 16, Fig. 8.
1966. Petkova & Kitanov, p. 9, Pl. 2, Figs 3, 5.
1987. Palamarev & Petkova, p. 63, Pl. 17, Fig. 7.
1988. Palamarev & Kitanov, p. 188, Pl. 4, Fig. 12.
1935. *F. orientalis* Lipsky; Stefanov & Jordanov, p. 36, Pl. 7, Figs 6-7; Pl. 9, Figs 2-5; Fig.-text 37.
1984. Kitanov, p. 6, Fig. 11.2.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Tolovitsa, Shishmanovo (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Fagus pristina* Saporta**

1867. Saporta, p. 69, Pl. 6, Figs 1-3.
1987. Palamarev & Petkova, p. 62, Pl. 18, Figs 1a-b, 3-4.
1967. *F. ferruginea* Aiton foss.; Petkova, p. 142, Pl. 3, Fig. 7; Pl. 11, Fig. 3.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Fagus silesiaca* H. Walther & Zastawniak**

1991. Walther & Zastawniak, p. 156, Pl. 1, Figs 1-6; Pl. 2, Fig. 1; Figs-text 1.1-6.
1998. Palamarev & al., p. 15.
1929. *F. attenuata* Göpp.; Stojanoff & Stefanoff, p. 44, Figs 1-2; Pl. 5, Figs 9-10; Fig.-text 11.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Sofia

basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

FICUS L. – MORACEAE

"Ficus" arcinervis (Rossm.) Heer

1856. Heer, p. 64, Pl. 82, Fig. 4.
1964a. Palamarev, p. 18, Pl. 9, Fig. 3.
1966. Palamarev & Petkova, p. 50.
1840. *Phyllites arcinervis* Rossm.; Rossmässler, p. 29, Pl. 3, Fig. 15.
Material: Li.
Location and stratigraphical range: Devin (Devin Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Ficus* is questionable.

"Ficus" cf. hercules Ettingsh.

1963a. Palamarev, p. 210, Fig.-text 6.
1868. *Ficus hercules* Ettingsh.; Ettingshausen, p. 58, Pl. 21.1.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Ficus* is questionable.

"Ficus" lanceolata (C.O. Weber) Heer

1856. Heer, p. 62, Pl. 81, Figs 2-5.
1961. Palamarev, p. 182, Pl. 4, Fig. 2; Fig.-text 12.
1964a. Palamarev, p. 18.
1852. *Apocynophyllum lanceolatum* C.O. Weber, p. 188, Pl. 21, Fig. 1
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Ficus* is questionable.

"Ficus" insignis Ettingsh.

1851. Ettingshausen, p. 42, Pl. 10, Fig. 7.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Ficus* is questionable.

Ficus lucida Chandler

1962. Chandler, p. 58, Pl. 7, Figs 13-18.
1973. Palamarev, p. 80, Pl. 2, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

Ficus multinervis Heer

1966. Petkova & Kitanov, p. 11, Pl. 2, Fig. 4.
1967. Petkova, p. 142, Pl. 4, Fig. 4.
1967. Palamarev, p. 93.
Rev. 1987. *Pleiomeris formosa* (Heer) Palam. & Petkova; Palamarev & Petkova, p. 105, Pl. 28, Fig. 3.

"Ficus" truncata Heer

1859. Heer, p. 183, Pl. 152, Fig. 15.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation. Upper Eocene – Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Ficus* is questionable.

Ficus sp.

1964a. Palamarev, p. 18, Fig.-text 14.
Rev. 1987. *Quercus lyellii* Heer; Palamarev & Petkova, p. 72, Pl. 20, Figs 4-5.

Ficus sp.

1966. Petkova & Kitanov, p. 10, Pl. 3, Fig. 1; Pl. 7, Fig. 3.
Rev. 1987. *Ocotea oblanceolata* Palam. & Petkova; Palamarev & Petkova, p. 37, Pl. 11, Figs 1-6.

FORESTIERA Poir. – OLEACEAE

Forestiera petzoldii Jähnichen & H. Walther

1974. Jähnichen & Walther, p. 19, Pl. 3, Figs 1-6; Pl. 4, Figs 1-6; Fig.-text 1-5.

1995b. Uzunova, p. 10, Pl. 8, Figs 1-5.
Material: Cu.
Location and stratigraphical range: Kladoroub-Ostrokaptsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

FRANGULA Mill. – RHAMNACEAE

Frangula solitaria Gregor

1977. Gregor, p. 21, Pl. 19, Figs 7-8.
1987. Palamarev & Petkova, p. 133, Pl. 34, Figs 4-5.
1982. *Frangula* sp. (ex sect. *Cascaria* Grubov); Palamarev, p. 20, Pl. 6, Figs 12-13, det. Palamarev & Petkova, 1987.
Material: Ca.
Location and stratigraphical range: Slavotin, Gabare (Krivodol Formation, Volhynian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

Frangula sp. (ex sect. *Cascaria* Grubov)

1982. Palamarev, p. 20, Pl. 6, Figs 12-13.
Rev. 1987. *Frangula solitaria* Gregor; Palamarev & Petkova, p. 133, Pl. 34, Figs 4-5.

FRAXINUS L. – OLEACEAE

Fraxinus excelsior L. foss.

1929. Stojanoff & Stefanoff, p. 90, Fig. 1; Pl. 1, Fig. 23; Fig.-text 23.
1984. Kitanov, p. 65, Fig. 14.5.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Fraxinus ornus L.

1929. Stojanoff & Stefanoff, p. 91, Fig.-text 23.9.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Fraxinus saxonica Friedrich

1883. Friedrich, p. 179, Pl. 24, Figs 1-3; Pl. 28, Fig. 11.
1932. Konjarov, p. 54, Pl. 22, Fig. 6.
Material: Li.
Location and stratigraphical range: Pernik (Coalbearing formation, Upper Oligocene).
Collection: Unkown.

Fraxinus ungeri (Gaudin) Knobloch & Kvaček

1976. Knobloch & Kvaček, p. 63, Pl. 7, Fig. 7; Pl. 11, Fig. 10; Pl. 13, Figs 2, 5; Pl. 14, Fig. 13; Pl. 14, Fig. 13; Pl. 28, Figs 1-3, 5-8; Pl. 29, Figs 1, 4, 7-9; Pl. 30, Figs 1-2; Pl. 31, Figs 14-15; Pl. 33, Figs 1-3; Fig.-text 27.
1987. Palamarev & Petkova, p. 143, Pl. 37, Fig. 6.
1859. *Pavia ungeri* Gaudin in Gaudin & Strozzi, p. 17, Pl. 4.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

GAYLUSSACIA Kunth – ERICACEAE

Gaylussacia sp. aff. *G. brachycera* Gray

1935. Stefanov & Jordanov, p. 71, Fig.-text 75.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Gaylussacia sp. aff. *G. ursina* Torr. & Gray

1935. Stefanov & Jordanov, p. 71, Pl. 24, Fig. 3; Fig.-text 74.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

GIRONNIERA Gaudich. – ULMACEAE

Gironniera cf. *carinata* Mai

1973. Palamarev, p. 83, Pl. 2, Figs 11-12.
1970a. *G. carinata* Mai, p. 444, Pl. 58, Figs 1-9.
Material: Li.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

GLEDITSIA L. – FABACEAE

***Gleditsia lyelliana* (Heer) Hantke**

1980. Hantke in Gregor & Hantke, p. 167, Pl. 9, Fig. 5.
1987. Palamarev & Petkova, p. 114, Pl. 30, Figs 9-12.
1998. Palamarev & al., pp. 14-15.
1999b. Bozukov, p. 54, Pl. 7, Fig. 4
1999a. Palamarev & al., p. 36.
1999b. Palamarev & al., p. 18.
1859. *Podogonium lyellianum* Heer, p. 117, pars Pl. 136, Figs 22-48 [non Figs 10-25 = *Gleditsia knorrii* (Heer) Gregor].
1937. *P. latifolium* Heer; Konstantinov, p. 266, Pl. 4, Fig. 14.
1964a. *P. knorrii* Heer; Palamarev, p. 24, Pl. 11, Fig. 2; Fig.-text 24.
1967. Palamarev, p. 95.
1967. Petkova, p. 145, pars Pl. 6, Fig. 7 (non Fig. 6 = *Sophora europaea* Unger); Pl. 13, Fig. 6.
1975. Palamarev & Petkova, p. 208.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Georgi Dobrevo (Limestone layer, Priabonian – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Pustrogor (Pustrogor Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi, Pelovo, Slavyanovo (Krivodol Formation, Volhynian); Belo Pole (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Gleditsia* aff. *triacanthos* L.**

1929. Stojanoff & Stefanoff, p. 76, Pl. 11, Figs 9-10.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

GORDONIA Ellis – THEACEAE

***Gordonia hradekensis* (Kvaček & Bůžek) Bozukov & Palam.**

1995. Bozukov & Palamarev, p. 176, Fig. 7.
1999b. Bozukov, p. 49.
1966. *Symplociphyllum hradekense* Kvaček & Bůžek, p. 293, Pl. 2, Figs 5-6; Pl. 3, Fig. 1; Pl. 4, Fig. 8.
1984. *Polyspora hradekensis* (Kvaček & Bůžek) Kvaček & H. Walther, p. 335, Pl. 57-59.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Gordonia pliocenica Stef. & Ganchev

1951. Stefanov & Ganchev, p. 170, Fig. 5 (nom. subnudum).
Rev. 1995. *Gordonia stefanovii* Palam. & Bozukov; Bozukov & Palamarev, p. 163, Figs 8-10.

***Gordonia stefanovii* Palam. & Bozukov** (Plate III, Figs 1, 2).

1995. Palamarev & Bozukov in Bozukov & Palamarev, p. 183, Figs 8-10.
1999b. Bozukov, p. 49.
1951. *G. pliocenica* Stef. & Ganchev; Stefanov & Ganchev, p. 170, Fig. 5 (nom. subnudum).
Holotypus: 1951. Stefanov & Ganchev, Fig. 5, (N Sat-1538), Bozukov & Palamarev (1995).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

GREVILLEA R.W. Braun – PROTEACEAE

***"Grevillea" haeringiana* Ettingsh.**

1853. Ettingshausen, Pl. 14, Figs 9-14.
1967. Palamarev, p. 94.
1961. *"Grevillea"* cf. *G. haeringiana* Ettingsh.; Palamarev, p. 182, Fig. 13.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Borovets (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Grevillea* is questionable.

GREWIA L. – TILIACEAE

Grewia crenata Heer

1932. Konjarov, p. 98, Pl. 29, Figs 1-2.
1937. Konstantinov, p. 266, Pl. 5, Figs 3, 5.

Rev. 1998b. *Cercidiphyllum crenatum* (Unger) R.W. Brown; Bozukov, p. 9, Pl. 3, Fig. 1.

GYMNOCLADUS **Lam. – CAESALPINIACEAE**

***Gymnocladus* cf. *meoreatharica* Kolak.**

1975. Palamarev & Kitanov, p. 77, Pl. 1, Fig. 2.
1955. Kolakovsky, p. 32, Pl. 19, Fig. 3.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

HALESIA **Ellis – STYRACACEAE**

***Halesia crassa* (C. & E. Reid) Kirchh.**

1943. Kirchheimer, p. 505, Fig.-text 1-2.
1997. Mai & Palamarev, p. 486, Pl. 2, Figs 3-4, 7.
1915. *Camptotheca crassa* C. & E. Reid, p. 121, Pl. 14, Figs 1 a-b, 3-4.
Material: Ca.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian); Oranovo (Simitli Formation, Maeotian).
Collection: IB (BAS).

***Halesia* aff. *diptera* Ellis**

1999b. Bozukov, p. 59, Pl. 7, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

HAMAMELIS **L. – HAMAMELIDACEAE**

***Hamamelis kachetica* Kolak.**

1967. Kolakovsky in Kolakovsky & Ratiani, p. 42, Pl. 4, Figs 8-9; Pl. 5, Figs 1-4, 6.
1972. Kitanov, p. 176, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

HARTIA **Dunn – THEACEAE**

***Hartia palaeorhodopensis* Bozukov & Palam.** (Plate IV, Fig. 2).

1995. Bozukov & Palamarev, p. 185, Figs 11, 13-14.
1999b. Bozukov, p. 49.
Holotypus: Fig. 14, (N Sat-2171), Bozukov & Palamarev (1995).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

HARTZIELLA **Szafer – ONAGRACEAE**

***Hartziella miocaenica* Szafer**

1963. Szafer, p. 27, Pl. 1, Figs 8-14; Pl. 2, Figs 1-7; Pl. 3, Figs 3-6; Pl. 4, Figs 3-4, 7-8; Pl. 6, Fig. 3.
1994b. Palamarev, p. 30, Pl. 5, Fig. 2.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

HEDERA **L. – ARALIACEAE**

***Hedera helix* L.**

1929. Stojanoff & Stefanoff, p. 84, Figs 3-4; Pl. 12, Figs 4-5; Fig.-text 22.
1934. Stefanov & Jordanov, Pl. 8, Fig. 4.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

HEMIPTELEA **Planch. – ULMACEAE**

***Hemiptelea* sp.**

1995. Palamarev & Staneva, p. 118.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

HOVENIA Thunb. – RHAMNACEAE

Hovenia aff. *dulcis* Thunb.

2000. Bozukov, p. 23, Pl. 2, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Hovenia sp.

1975. Palamarev & Petkova, p. 215, Pl. 2, Fig. 2; Pl. 5, Figs 4-5.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

HUMULUS L. – CANNABACEAE

Humulus cf. *rotundatus* Dorof.

1971. Palamarev, p. 155, Pl. 22, Figs 2-3.
1987. Palamarev & Petkova, p. 60, Pl. 16, Fig. 5.
1963. *H. rotundatus* Dorof.; Dorofeev, p. 160, Pl. 25, Figs 5-9.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slavotin (Krivodol Formation, Volhynian); Drenovets (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

HYDRANGEA L. – HYDRANGEACEAE

Hydrangea palaeopirinica Palam.

1966. Palamarev in Palamarev & Petkova, p. 61, Pl. 6, Figs 1-2; Fig.-text 10.
1967. Palamarev, p. 95.
Holotypus: Pl. 6, Fig. 1, Palamarev & Petkova (1966).
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

HYPERICUM L. – CLUSIACEAE

Hypericum aff. *ponticum* Lipsky

1968. Palamarev, p. 204, Pl. 40, Fig. 34; Fig.-text 5.
Material: Ca.
Location and stratigraphical range: Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Hypericum septestum Nikitin ex Dorof.

1959. Dorofeev, p. 178.
1987. Palamarev & Petkova, p. 94, Pl. 25, Figs 3a-b.
Material: Ca.
Location and stratigraphical range: Drenovets, Gabare, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

ILEX L. – AQUIFOLIACEAE

Ilex ambigua Unger

1847. Unger, p. 149, Pl. 50, Fig. 14.
1963a. Palamarev, p. 212, Fig.-text 10.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Ilex aquifolium L. foss.

1935. Stefanov & Jordanov, p. 61.
1967. Petkova, p. 147, Pl. 7, Fig. 5.
1987. Palamarev & Petkova, p. 130, Pl. 32, Fig. 6.
1988. Palamarev & Kitanov, p. 196, Pl. 9, Fig. 4.
1929. *Ilex* aff. *aquifolium* L.; Stojanoff & Stefanoff, p. 81, Pl. 11, Fig. 14.
1932. *I. studeri* A. Braun.; Konjarov, p. 125, Pl. 37, Fig. 1.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Pelovo (Krivodol Formation, Volhynian); Oranovo-Simitli (Simitli Formaton, Maeotian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Ilex crassicuticularis Uzunova

1995b. Uzunova, p. 9, Pl. 6, Figs 1-5.
Holotypus: Pl. 6, Figs 1, 3, 5, Uzunova (1995b).
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Ilex* aff. *crenata* Thunb.**

2000. Bozukov, p. 22, Pl. 1, Fig. 2; Pl. 3, Fig. 6.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Ilex falsanii* Saporta & Marion**

1876. Saporta & Marion, p. 164, Figs 2-9.
1987. Palamarev & Petkova, p. 129, Pl. 32, Fig. 4.
1988. Černjavska & al., p. 51.
1967. *Rhus pteleaefolia* C.O. Weber; Petkova, p. 147, Pl. 7, Fig. 3; Pl. 13, Fig. 1.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Krivodol, Pelovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Ilex georgica Kolak.

1966. Petkova & Kitanov, p. 16, Pl. 5, Fig. 1; Pl. 8, Fig. 3.
Rev. 1987. *Arbutus guriense* Usnadze; Palamarev & Petkova, p. 99, Pl. 26, Figs 6-7.

***Ilex* cf. *microcassine* Kolak.**

2000. Bozukov, p. 16, Pl. 1, Fig. 4.
1964. *I. microcassine* Kolak.; Kolakovsky, p. 65, Pl. 8, Fig. 10.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Ilex rottensis* Weyland**

1938. Weyland, p. 158.
1963b. Palamarev, p. 77, Pl. 2, Fig. 21.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Middle Oligicene).
Collection: IB (BAS).

***Ilex simile* Kolak.**

1959. Kolakovsky, p. 223, Pl. 5, Fig. 1.
1998. Palamarev & al., p. 15.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene);
Collection: IB (BAS).

Ilex studeri A. Braun

1932. Konjarov, p. 125, Pl. 37, Fig. 1.
1967. Palamarev, p. 96.
Rev. 1988. *Ilex aquifolium* L. foss.; Palamarev & Kitanov, p. 196, Pl. 9, Fig. 4.

ILLICIUM L. – ILLICIACEAE

***Illicium weylandii* Mai**

1970a. Mai, p. 448, Pl. 59, Figs 19-21.
1997. Mai & Palamarev, p. 484, Pl. 1, Figs 6-7.
Material: Ca.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

IODES P. Browne – ICACINACEAE

***Iodes* cf. *multireticulata* E. Reid & Chandler**

1973. Palamarev, p. 90, Pl. 7, Figs 9-11.
1933. *I. multireticulata* E. Reid & Chandler, p. 325, Pl. 15, Figs 1-11.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

ITEA L. – ITEACEAE

***Itea europaea* Mai**

1985. Mai, p. 84, Pl. 6, Figs 1-8.
1997. Mai & Palamarev, p. 487, Pl. 2, Figs 9-10.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

JUGLANS L. – JUGLANDACEAE

***Juglans acuminata* A. Braun ex Unger**

1850a. Unger, p. 468.
1929. Stojanoff & Stefanoff, p. 36, Pl. 8, Fig. 2; Fig.-text 9.
1932. Konjarov, p. 129, Pl. 41, Figs 1-3.

1937. Konstantinov, sub sp. indet., Pl. 4, Fig. 12, det. Palamarev & Petkova 1987.
1961. Palamarev, p. 180, Pl. 2, Fig. 5; Fig.-text 7.
1964a. Palamarev, p. 15.
1987. Palamarev & Petkova, p. 85, Pl. 22, Figs 4-6.
1998. Palamarev & al., p. 15.
1999b. Bozukov, p. 48, Pl. 1, Fig. 4.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligicene); Satovcha (Sivik Formation, Middle Miocene); Lepitsa, Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).
Note: According to Iljinskaja (1994) the samples described under the above name should be referred to genus *Cedrela* P. Browne – *C. acuminata* (A. Braun) Iljinsk.

Juglans bergomensis (Bals.-Criv.) A. Massal.

1852. Massalongo, p. 253, Pl. 3, Figs 2-5.
1993. Palamarev, p. 300, Pl. 1, Figs 1-2.
1939. *J. cinerea* L. foss. Bronn; Kitanov, p. 133-134, Figs 2-3.
1840. *Juglandites bergomensis* Bals.-Criv.; Balsamo-Crivelli, p. 125.
Material: Ca.
Location and stratigraphical range: Lom – Momin Brod (Brusartsi Formation, Dacian – Romanian).
Collection: IB (BAS).

Juglans cinerea L. foss.

1935. Stefanov & Jordanov, p. 44, Pl. 16, Figs 2-4; Fig.-text 41.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Juglans cinerea L. foss.

1939. Kitanov, p. 133, Figs 1-3.
Rev. 1993. *Juglans bergomensis* (Bals.-Criv.) A. Massal.; Palamarev, p. 300, Pl. 1, Figs 1-2.

Juglans kitanovii Palam.

1993. Palamarev, p. 301, Pl. 1, Figs 3-4, 6-7, 9.
Holotypus: Pl. 1, Figs 3-4, Palamarev (1993).
Material: Ca.
Location and stratigraphical range: Lom – Momin Brod (Brusartsi Formation, Dacian – Romanian).
Collection: IB (BAS).

Juglans regia L.

1956. Kitanov & Nikolova, p. 87, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

Juglans ungeri Heer

1859. Heer, p. 199, Pl. 155, Fig. 18.
1963b. Palamarev, p. 72, Pl. 1, Fig. 8.
1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

KADSURA Kaempf. ex Juss. – SCHISANDRACEAE

Kadsura breddinii Weyland

1934. Weyland, p. 68, Pl. 11, Fig. 2.
1987. Palamarev & Petkova, p. 33, Pl. 8, Fig. 5.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Kadsura singularis Palam. & Petkova (Plate IV, Fig. 6).

1987. Palamarev & Petkova, p. 33, Pl. 8, Figs 1a-b; Pl. 9, Fig. 5.
Holotypus: Pl. 8, Fig. 1a, (N R-3635), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

LAMIUM L. – LAMIACEAE

Lamium aff. *galeobdolon* Crantz

1929. Stojanoff & Stefanoff, p. 92, Pl. 12, Fig. 20.

Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

LAUROCERASUS M. Roem. – ROSACEAE

Laurocerasus officinalis M. Roem. foss.

1987. Palamarev & Petkova, p. 110, Pl. 29, Figs 1a-b.
1960. Kitanov, p. 372, Pl. 5, Fig. 2.
1929. *Prunus laurocerasus* L.; Stojanoff & Stefanoff, p. 75, Pl. 11, Fig. 7.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi (Krivodol Formation, Volhynian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian) – Operata (Lozenets Formation, Romanian).
Collection: IB (BAS).

LAUROPHYLLITES Weyland & Kilpper – LAURACEAE

Laurophyllites areolatus Kvaček

1971a. Kvaček, p. 72, Pl. 12, Figs 1-2; Pl. 2, Fig. 13.
1995a. Uzunova, p. 16, Pl. 7, Figs 1-3.
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

LAUROPHYLLUM Göpp. – LAURACEAE

Laurophyllum acutimontanum Mai

1963. Mai, p. 72, Pl. 8, Figs 7, 9, 12; Pl. 9, Figs 1-4; Fig.-text 11 f-h.
1988. Černjavska & al., p. 30, Pl. 3, Fig. 2.
1995. Palamarev & Staneva, p. 117, Pl. 1, Fig. 6.
1999a. Palamarev & al., p. 31, Pl. 4, Fig. 8.
1999b. Palamarev & al., p. 9, Pl. 2, Figs 3-5; Pl. 8, Fig. 1.
2001. Palamarev & al., p. 281, Pl. 1, Fig. 4.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

Laurophyllum hradekense Kvaček & Bůžek

1966. Kvaček & Bůžek, p. 292, Pl. 2, Figs 2-3; Pl. 4, Figs 5-6.
1995a. Uzunova, p. 14, Pl. 3, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).
Note: According to Bůžek & al. (1989), *Laurophyllum hradekense* belongs to *Ocotea.*

Laurophyllum maricii Uzunova

2001. Uzunova, p. 3, Pl. 1, Fig. 5; Pl. 2, Figs 1-4; Pl. 3, Figs 1-3.
Holotypus: Pl. 2, Figs. 1-4, Uzunova (2001).
Material: Cu.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

Laurophyllum markarticense Kvaček

1971a. Kvaček, p. 52, Pl. 6; Figs 1-3; Fig.-text 2.
1995a. Uzunova, p. 15, Pl. 4, Figs 1-3.
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Laurophyllum medimontanum Bůžek, Holý & Kvaček

1976. Bůžek & al., p. 98, Pl. 16, Figs 1-6; Pl. 17, Figs 1-2.
1995a. Uzunova, p. 16, Pl. 6, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Laurophyllum pseudoprinceps Weyland & Kilpper

1963. Weyland & Kilpper, p. 100, Pl. 23, Figs 14-19; Fig.-text 6.
1995a. Uzunova, p. 14, Pl. 2, Figs 1-2.
1999. *Ocotea macrostoma* (Weyland & Kilpper) Uzunova & Stojanova, p. 10, Pl. 2, Figs 1-4.
1999. *O. undulata* (Weyland & Kilpper) Uzunova & Stojanova, p. 10, Pl. 2, Figs 3-6.
1999. *O. pseudoprinceps* (Weyland & Kilpper) Uzunova & Stojanova, p. 9, Pl. 1, Figs 1-5.
Material: Cu.

Location and stratigraphical range: Drenovets, Karbintsi (Krivodol Formation, Bessarabian); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Laurophyllum rugatum* Kvaček & Bůžek**

1966. Kvaček & Bůžek, p. 292, Pl. 1, Figs 3-5; Pl. 4, Fig. 4.
1995a. Uzunova, p. 15, Pl. 5, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Laurophyllum villense* (Weyland & Kilpper) Kvaček & Bůžek**

1966. Kvaček & Bůžek, p. 292.
1973. Palamarev & Uzunova, p. 818, Figs-text 3a-d.
1963. *Laurophyllites villensis* Weyland & Kilpper, p. 107, Pl. 27, Figs 38-43; Fig.-text 13.
Material: Cu.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

LAURUS L. – LAURACEAE

***Laurus abchasica* (Kolak. & Schakryl) Ferguson**

1974. Ferguson, p. 64, Figs 8a-d; Figs 9a-d.
1995a. Uzunova, p. 13, Pl. 1, Figs 1-3.
1958. *Laurophyllum abchasicum* Kolak. & Schakryl in Kolakovsky, p. 345, Pl. 7, Figs 1-3; Pl. 10, Figs 4-8.
Material: Cu.
Location and stratigraphical range: Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Laurus fürstenbergii Heer

1967. Petkova, p. 145, Pl. 5, Fig. 9.
Rev. 1987. *Lindera antiqua* (Heer) R.S. Lamotte; Palamarev & Petkova, p. 41, Pl. 10, Fig. 4.

***Laurus grandifolia* Ettingsh.**

1888. Ettingshausen, p. 44, Pl. 3, Figs 23-23a.
1964a. Palamarev, p. 21, Fig.-text 17.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Laurus* cf. *latior* Saporta & Marion**

1995. Palamarev & Staneva, p. 117, Pl. 2, Fig. 1.
1873. *L.* (*Persea*) *latior* Saporta & Marion, p. 50, Pl. 6, Fig. 3.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Laurus nobilis* L. foss.**

1935. Stefanov & Jordanov, p. 48, Pl. 16, Fig. 8; Fig.-text 45.
1962. Hadžiev & Palamarev, p. 9, Fig. 1v.
1967. Petkova, p. 145, Pl. 6, Figs 1-2.
1984. Kitanov, p. 53, Fig. 8.5.
Material: Li.
Location and stratigraphical range: Montana, Pelovo, Stavertsi, Stoudeno Bouche (Krivodol Formation, Volhynian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian);
Collection: IB (BAS).

Laurus ocoteifolia Ettingsh.

1963a. Palamarev, p. 209, Fig.-text 3.
Rev. 1999b. *Litsea ocoteifolia* (Ettingsh.) Imkhan.; Palamarev & al., p. 10.

1975. Palamarev & Petkova, p. 207.
Rev. 1998b. *Litsea ocoteifolia* (Ettingsh.) Imkhan.; Bozukov, p. 6, Pl. 3, Fig. 2.

***Laurus phoeboides* Ettingsh.**

1851. Ettingshausen, p. 17, Pl. 3, Fig. 3.
1964a. Palamarev, p. 20, Pl. 8, Fig. 2.
1966. Palamarev & Petkova, pp. 50, 57.
Material: Li.
Location and stratigraphical range: Belitsa Sandstone and sandy argillaceous formation, Lower Oligocene); Devin, Selcha (Devin Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Laurus pliocenica* (Saporta & Marion) Kolak.**

1960. Kolakovsky, p. 43, Pl. 10, Fig. 2.
1987. Palamarev & Petkova, p. 41, Pl. 10, Figs 1-2, 5, 7.
1876. *L. canariensis* Webb & Berthel. *pliocenica* Saporta & Marion, p. 116, Pl. 27, Figs 6-7; Pl. 28, Figs 1-8.

Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Rouzhintsi, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Laurus primigenia Unger

1932. Konjarov, p. 98, Pl. 27, Figs 7-9.
1937. Konstantinov, Pl. 3, Fig. 18; Pl. 4, Figs 1-3.
1966. Palamarev & Petkova, p. 57.
Rev. 1987. *Litsea primigenia* (Unger) Takht.; Palamarev & Petkova, p. 39, Pl. 9, Figs 2, 4; Pl. 10, Fig. 9.

Laurus princeps Heer

1964a. Unger, Palamarev, p. 20, Pl. 7, Figs 1-2; Pl. 8, Fig. 1.
1966. Petkova & Kitanov, p. 12, Pl. 3, Figs 2, 5; Pl. 7, Fig. 5; Pl. 8, Fig. 5.
1967. Petkova, p. 145, Pl. 5, Fig. 8; Pl. 12, Fig. 5.
Rev. 1987. *Persea princeps* (Heer) Schimp.; Palamarev & Petkova, p. 34, Pl. 9, Fig. 1.

***Laurus saxonica* Friedrich**

1883. Friedrich, p. 28, Pl. 1, Fig. 8; Pl. 2, Fig. 4.
1964a. Palamarev, p. 21, Pl. 6, Fig. 2; Fig.-text 18.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

LEUCOTHOË D. Don – ERICACEAE

***Leucothoë narbonensis* (Saporta) Weyland**

1934. Weyland, p. 118, Pl. 21, Figs 3-6.
1989. Palamarev, p. 50, Pl. 2, Fig. 7.
1865. *Andromeda narbonensis* Saporta, p. 142, Pl. 8, Fig. 1.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Leucothoë protogaea* (Unger) Schimp.**

1874. Schimper, p. 124.
1961. Palamarev, p. 188.
1964a. Palamarev, p. 31, Pl. 12, Fig. 3.
1966. Palamarev & Petkova, p. 57.
1967. Palamarev, p. 94.
1850b. *Andromeda protogaea* Unger, p. 43, Pl. 13, Figs 1-9.
1937. Konstantinov, p. 266, Pl. 2, Fig. 5.
Material: Li.
Location and stratigraphical range: Belitsa (Sandstone and sandy argillaceous formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

LINDERA Thunb. – LAURACEAE

***Lindera antiqua* (Heer) R.S. Lamotte**

1952. Lamotte, p. 204.
1987. Palamarev & Petkova, p. 41, Pl. 10, Fig. 4.
1995. *Lindera* cf. *antiqua* (Heer) R.S. Lamotte; Palamarev & Staneva, p. 117.
1999b. Palamarev & al., p. 10.
1856. *Benzoin antiquum* Heer, p. 81, pars Pl. 90, Figs 1-7 (non Fig. 8 = fruct. sp. indet.).
1935. Stefanov & Jordanov, p. 52, Pl. 18, Figs 1-4; Fig.-text 48.
1967. *Laurus furstenbergii* Heer; Petkova, p. 145, Pl. 5, Fig. 9.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Pelovo, Vodnyantsi (Krivodol Formation, Bessarabian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Lindera* aff. *communis* Hemsl. foss.**

1964b. Palamarev, p. 132, Pl. 1. 3; Pl. 5. 2.
1967. Palamarev, p. 92.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing Formation, Middle Miocene).
Collection: IB (BAS).

***Lindera ovata* Kolak.**

1957. Kolakovsky, p. 277, Pl. 14, Figs 4-5; Pl. 15, Fig. 1.
1984. Kitanov, p. 51, Pl. 7: 1.
1967. *Lindera* cf. *L. ovata* Kolak.; Petkova, p. 142, Pl. 5, Fig. 6; Pl. 12, Fig. 4.

Material: Li.
Location and stratigraphical range: Pelovo, Stavertsi (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

LIQUIDAMBAR L. – ALTINGIACEAE

***Liquidambar europaea* A. Braun**

1836. Braun in Buckland, p. 513.
1932. Konjarov, Pl. 56, Fig. 8.
1935. Stefanov & Jordanov, p. 53, Fig. 49; Pl. 19, Figs 5-8; Pl. 20, Fig. 1.
1940. Kitanov, p. 18, Pl. 5, Fig. 3.
1956. Kitanov & Nikolova, p. 102, Pl. 5, Fig. 2.
1982. Kitanov, p. 37.
1960. *L. styraciflua* L.; Kitanov, p. 372, Pl. 5, Fig. 2.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian – Lower Dacian), – Lozenets, Operata, Zemlyane (Lozenets Formation, Romanian).
Collection: IB (BAS).

Liquidambar styraciflua L.

1960. Kitanov, p. 372, Pl. 5, Fig. 2.
Rev. 1982. *Liquidambar europaea* A. Braun; Kitanov, p. 37.

LIRIODENDRON L. – MAGNOLIACEAE

***Liriodendron geminatum* Kirchh.**

1957. Kirchheimer, p. 216, Pl. 35, Figs 146a-e.
1968. Palamarev, p. 32, Pl. 40, Figs 4-5; Fig.-text 2.
1987. Palamarev & Petkova, p. 32, Pl. 7, Figs 2-3.
1989. Palamarev, p. 47, Pl. 2, Figs 5-6.
Material: Ca.
Location and stratigraphical range: Drenovets (Krivodol Formation, Bessarabian); Gabare, Krivodol, Slavotin (Krivodol Formation, Volhynian); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

LITHOCARPUS Blume – FAGACEAE

Lithocarpus decurrens Andr. & Kovács

1987. Palamarev & Petkova, p. 66, Pl. 17, Fig. 6.
Rev.: 1998. *Pasaniopsis decurrens* (Andr. & Kovács) Palam. & Mai; Palamarev & Mai, p. 246, Pl. 4, Fig. 1, Pl. 6, Fig. 9.

***Lithocarpus* aff. *echinophora* (Hickel & A. Camus) A. Camus**

1999a. Bozukov, p. 4, Pl. 3, Fig. 2.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Lithocarpus palaeobalcanica* Palam. & Petkova** (Plate II, Figs 5, 6).

1987. Palamarev & Petkova, p. 67, Pl. 9, Figs 1-5.
Holotypus: Pl. 19, Fig. 5, (N R-3536), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Belo Pole, Karbintsi (Krivodol Formation, Bessarabian); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Lithocarpus palaeorhodopensis* Palam. & Mai** (Plate I, Fig. 3)

1998. Palamarev & Mai, p. 237, Pl. 6, Figs 5-6; Pl. 10, Fig. 14; Pl. 11, Figs 5-7; Pl. 12, Fig. 1.
1999b. Palamarev & al., p. 13, Pl. 5, Fig. 3.
Holotypus: Pl. 6, Fig. 5, (N SmPS-58a), Palamarev & Mai (1998).
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligogene), Belitsa (Sandstone and sandy argillaceous formation – Lower Oligogene).
Collection: IB (BAS).

LITSEA Juss. – LAURACEAE

***Litsea expansa* Saporta & Marion**

1878. Saporta & Marion, p. 68, Pl. 11, Figs 1-2.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina, Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligogene).
Collection: IB (BAS).

Litsea sp. aff. *L. lancifolia* (Roxb.) Benth. & Hook. f.

1964b. Palamarev, p. 132, Pl. 6, Fig. 1.
1967. Palamarev, p. 92.
Rev. *Litsea primigenia* (Unger) Takht.; Palamarev, hoc loco.

Litsea muelleri Friedrich

1883. Friedrich, p. 115, Pl. 16, Figs 6-9.
1964a. Palamarev, p. 23, Pl. 6, Fig. 3; Fig.-text 20.
1975. Palamarev & Petkova, p. 208.
1999b. Palamarev & al., p. 10.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Lefka (Sandy argillaceous formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Litsea ocoteifolia (Ettingsh.) Imkhan.

1974. Imkhanitskaya, p. 38, Pl. 15, Fig. 4; Fig.-text 15.7.
1937. Konstantinov, sub. sp. indet., Pl. 2, Figs 6-7, det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14. Pl. 1.
1995. Palamarev & Staneva, p. 117.
1998. Palamarev & al., p. 15.
1998b. Bozukov, p. 6, Pl. 3, Fig. 2.
1999b. Palamarev & al., p. 10.
1851. *Laurus ocoteaefolia* Ettingsh.; Ettingshausen, p. 17, Pl. 3, Fig. 14.
1963a. Palamarev, p. 209, Fig.-text 3.
1975. Palamarev & Petkova, p. 207.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Braikovitsa (Luki Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Litsea pontica Kolak.

1964. Kolakovsky, p. 107, Pl. 41, Figs 2-3.
1998b. Bozukov, p. 6, Pl. 2, Fig. 2.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Litsea primigenia (Unger) Takht.

1963. Takhtajan, p. 202, Pl. 6, Fig. 9.
1966. Palamarev & Petkova, p. 57.
1967. Palamarev, p. 92.
1987. Palamarev & Petkova, p. 39, Pl. 9, Figs 2, 4; Pl. 10, Fig. 9.
1988. Černjavska & al., p. 30.
1995. Palamarev & Staneva, p. 117, Pl. 2, Fig. 7.
1998. Palamarev & al., pp. 14-15.
1999a. Palamarev & al., p. 31, Pl. 1, Fig. 11.
1999b. Palamarev & al., p. 10, Pl. 2, Fig. 6.
1964b. *Litsea* sp. aff. *L. lancifolia* (Roxb.) Benth. & Hook. f.; Palamarev, p. 132, Pl. 6, Fig. 1.
1967. Palamarev, p. 92.
1850b. *Laurus primigenia* Unger, p. 38, Pl. 40, Figs 1-4.
1932. Konjarov, p. 98, Pl. 27, Figs 7-9.
1937. Konstantinov, Pl. 3, Fig. 18; Pl. 4, Figs 1-3.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Pelovo, Rouzhintsi, Tolovitsa, Vidin (Krivodol Formation, Volhynian); Cherno Pole (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

LONICERA L. – CAPRIFOLIACEAE

Lonicera etrusca Santi

1929. Stojanoff & Stefanoff, p. 93, Fig. 11; Pl. 12, Fig. 22; Fig.-text 23.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Lonicera nigra L.

1929. Stojanoff & Stefanoff, p. 93, Fig. 10; Pl. 12, Fig. 23; Fig.-text 23.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

***Lonicera* sp. aff. *L. xylosteum* L.**

1934. Stefanov & Jordanov, p. 36, Pl. 3, Fig. 21; Pl. 8, Figs 19-20.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

LORANTHUS Jacq. – LORANTHACEAE

***Loranthus palaeoeuropeus* Kutuzkina**

1960. Kutuzkina, p. 140, Pl. 1, Figs a-b.
1987. Palamarev & Petkova, p. 132, Pl. 32, Fig. 2.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

LYCHNIS L. – CARYOPHYLLACEAE

***Lychnis slavotinica* Palam.**

1987. Palamarev in Palamarev & Petkova, p. 91, Pl. 24, Fig. 9.
1968. *Silene* aff. *asterias* Griseb.; Palamarev, p. 203, Pl. 40, Figs 10-12; Fig.-text 4-4a.
Holotypus: Pl. 24, Fig. 9, Palamarev & Petkova (1987).
Material: Ca.
Location and stratigraphical range: Drenovets, Gabare, Krivodol, Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

MAACKIA Rupr. & Maxim. – FABACEAE

***Maackia* aff. *tenuifolia* Hand.-Mazz.**

1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

MAGNOLIA L. – MAGNOLIACEAE

***Magnolia burseracea* (Menzel) Mai**

1975. Mai, p. 567, Pl. 35, Figs 24-33.
1994b. Palamarev, p. 24, Pl. 1, Figs 4-5.
1913. *Carpolithus burseraceus* Menzel, p. 84, Pl. 7, Figs 10-12.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Magnolia cor* Ludw.**

1857. Ludwig, p. 98, Pl. 21, Figs 1a-e.
1994b. Palamarev, p. 25, Pl. 3, Fig. 1.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Magnolia* cf. *cuneifolia* Baikovskaja**

1987. Palamarev & Petkova, p. 31, Pl. 7, Fig. 5.
1965. *M. cuneifolia* Baikovskaja in Kryshtofovich & Baikovskaja, p. 72, Pl. 18, Fig. 2.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Magnolia dianae* Unger**

1860. Unger, p. 28, Pl. 11, Figs 1-3.
1982. Kitanov, p. 35, Pl. 1, Fig. 2.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene); Sofia basin – Zemlyane (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Magnolia dsundzeana* (Palib.) Takht.**

1963. Takhtajan, p. 197, Pl. 3, Figs 1-2.
1987. Palamarev & Petkova, p. 31, Pl. 7, Fig. 7.
1998b. Bozukov, p. 3, Pl. 5, Fig. 2.
1937. *Annona dsundzeana* Palib.; Palibin, p. 51, Pl. 4, Fig. 20.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Magnolia euxina* Palib.**

1937. Palibin, p. 52, Figs 14-15.

1987. Palamarev & Petkova, p. 30, Pl. 7, Fig. 1.
1998b. Bozukov, p. 3, Pl. 5, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Magnolia georgica* Kolak.**

1952. Kolakovsky, p. 114, Pl. 9, Fig. 7.
1987. Palamarev & Petkova, p. 29, Pl. 7, Fig. 4.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation Volhynian).
Collection: IB (BAS).

***Magnolia* aff. *glauca* L.**

1929. Stojanoff & Stefanoff, p. 70, Pl. 11, Fig. 2.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Magnolia lignitum* (Unger) Mai**

1975. Mai, p. 571, Pl. 35, Figs 34-38; Pl. 36, Figs 39-49; Pl. 37, Figs 50-58.
1994a. Palamarev, p. 136, Pl. 2, Figs 12-13.
1994b. Palamarev, p. 24, Pl. 2, Figs 2-4.
1971. *M. sinuata* Kirchh.; Palamarev, p. 155.
1861. *Annona lignitum* Unger, p. 25, Pl. 10, Fig. 7.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene); Choukourovo (Coalbearing formation, Middle Miocene); Sofia basin – Kutina (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

***Magnolia longipetiolata* Ettingsh.**

1869. Ettingshuasen, p. 9, Pl. 41, Figs 7-9.
1963b. Palamarev, p. 73, Pl. 2, Fig. 12.
1967. Palamarev, p. 92.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtiska Formation, Lower Oligocene).
Collection: IB (BAS).

***Magnolia ludwigii* Ettingsh.**

1868b. Ettingshausen, pp. 871-872.
1961. Palamarev, p. 183, Pl. 6, Fig. 1; Fig.-text 14.
1967. Palamarev, p. 92,
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Upper Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Magnolia mirabilis* Kolak.**

1959. Kolakovsky, p. 243, Pl. 14, Figs 1-3.
1987. Palamarev & Petkova, p. 30, Pl. 7, Fig. 6.
1998b. Bozukov, p. 4, Pl. 5, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Magnolia sinuata Kirchh.

1971. Palamarev, p. 155.
Rev. *Magnolia lignitum* (Unger) Mai; Palamarev, hoc loco.

***Magnolia takhtajanii* Pneva**

1986. Pneva, p. 113, Pl. 1, Fig. 2; Pl. 2, Figs 1-3; Figs-text 1-4.
1995. Palamarev & Staneva, p. 116.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

***Magnolia ultima* Kirchh.**

1949. Kirchheimer, p. 216, Pl. 1, Fig. 4.
1970. Palamarev, p. 39, Pl. 1, Figs 5-6.
1971. Palamarev, p. 161.
1994a. Palamarev, p. 136, Pl. 1, Figs 5, 9.
1994b. Palamarev, p. 25, Pl. 2, Figs 5-7.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian);
Collection: IB (BAS).

MAGNOLIAESPERMUM Kirchh. – MAGNOLIACEAE

***Magnoliaespermum genitzii* (Engelh.) Kirchh.**

1957. Kirchheimer, p. l., p. 22, Pl. 37, Fig. 152; Pl. 38, Fig. 154.
1989. Palamarev, p. 46, Pl. 2, Fig. 1.
1870. *Livistona geinitzii* Engelh.; Engelhardt, p. 35, Pl. 10, Figs 4-5.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing Formation, Middle Miocene).
Collection: IB (BAS).

MALUS Mill. – ROSACEAE

***Malus* aff. *orientalis* Uglitzk.**

1970. Palamarev, p. 47, Pl. 3, Figs 3-4.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

MASTIXIA Blume – MASTIXIACEAE

***Mastixia cantiensis* E. Reid & Chandler**

1933. Reid & Chandler, p. 448, Pl. 25, Figs 1-6.
1967. Palamarev, p. 96.
Material: Ca.
Location and stratigraphical range: Brezhani (Goreshtiska Formation, Lower Oligocene).
Collection: IB (BAS).

***Mastixia meyeri* Kirchh.**

1939. Kirchheimer, p. 414, Fig.-text 8.2a.
1966. Palamarev & Petkova, p. 59, Pl. 4, Fig. 2; Fig.-text 7.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtiska Formation, Lower Oligocene).
Collection: IB (BAS).

MATUDAEA Lundell – HAMAMELIDACEAE

***Matudaea palaeobalcanica* Palam. & Petkova** (Plate IV, Fig. 4).

1987. Palamarev & Petkova, p. 51, Pl. 14, Figs 4-4a.
Holotypus: Pl. 14, Fig. 4, (N R-3531a), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

MEDICAGO L. – FABACEAE

***Medicago* aff. *lupulina* L.**

1994a. Palamarev, p. 143, Pl. 4, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

MELIOSMA Blume – SABIACEAE

***Meliosma* cf. *cuneifolia* Franch.**

1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

***Meliosma pliocaenica* (Szafer) Gregor**

1978. Gregor, p. 47, Pl. 10, Fig. 3.
1994b. Palamarev, p. 29, Pl. 5, Figs 6, 8.
1997. Mai & Palamarev, p. 488, Pl. 3, Figs 5-6.
1954. *Cicer pliocaenicum* Szafer, p. 40, Pl. 9, Figs 7-12.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene); Melnik (Kalimanska Formation, Lower Pontian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Meliosma* cf. *sheppeyensis* E. Reid & Chandler**

1933. Reid & Chandler, p. 378, Pl. 18, Figs 31-33.
1973. Palamarev, p. 89, Pl. 4, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Meliosma wetteraviensis* (Ludw.) Mai s. l.**

1964. Mai, p. 110.
1982. Palamarev, p. 18, Pl. 6, Figs 5, 8.
1857. *Hamamelis wetteraviensis* Ludw.; Ludwig, p. 105, Pl. 20, Figs 27a-c.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian).
Collection: IB (BAS).

MELISSA L. – LAMIACEAE

***Melissa elegans* E. Reid**

1920. Reid, p. 135, Pl. 10, Figs 7-8.
1970. Palamarev, p. 54, Pl. 4, Fig. 13; Pl. 7, Fig. 11.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

MENYANTHES L. – MENYANTHACEAE

***Menyanthes trifoliata* L. foss.**

1970. Palamarev, p. 53, Pl. 4, Figs 6-7.
1982. Palamarev, p. 22, Pl. 7, Fig. 8.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

MESPILUS L. – ROSACEAE

***Mespilus germanica* L.**

1935. Stefanov & Jordanov, p. 55, Pl. 21, Fig. 1; Fig.-text 51.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

MICHELIA L. – MAGNOLIACEAE

***Michelia palaeobalcanica* Palam.**

1973. Palamarev, p. 77, Pl. 1, Figs 1, 3-5; Pl. 4, Figs 6, 10.
Holotypus: Pl. 1, Figs 1, 4, Palamarev (1973).
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

MICRODIPTERA Chandler – LYTHRACEAE

***Microdiptera menzelii* (E. Reid) Mai**

1987. Mai, p. 113, Pl. 7, Figs 11-12.
1989. Palamarev, p. 52.
1927. *Diclidocarya menzelii* E. Reid, p. 580, Pl. 3, Figs 1-7.
1970. Palamarev, p. 49, Pl. 3, Figs 8-11.
1971. Palamarev, p. 154.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Microdiptera parva* Chandler**

1957. Chandler, p. 107, Pl. 15, Figs 133-149.
1971. Palamarev, p. 158, Pl. 22, Figs 11-12, 14,
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

MONOPLEUROPHYLLUM Andr. – ACERACEAE

Monopleurophyllum quercifolium (Göpp.) Kotl.

1967. Palamarev, p. 95.
Rev. 1992. *Acer aegopodifolium* (Göpp.) Baikovskaja; Palamarev & Bozukov, p. 62.

MORUS L. – MORACEAE

***Morus tertiaria* Dorof.**

1963. Dorofeev, p. 158, Pl. 24, Figs 21-22.
1982. Palamarev, p. 13, Pl. 4, Fig. 9.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

MYCELIS Cass. – ASTERACEAE

***Mycelis* aff. *muralis* (L.) Dumoryia**

1994a. Palamarev, p. 145, Pl. 4, Fig. 3.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

MYRICA L. – MYRICACEAE

***Myrica acuminata* Unger**

1850b. Unger, p. 30, Pl. 6. Figs 5-10.
1963b. Palamarev, p. 71, Pl. 1, Fig. 4.
1967. Palamarev, p. 93.
1999a. Palamarev & al., p. 33.
1999b. Palamarev & al., p. 15, Pl. 6, Fig. 3.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Myrica banksiaefolia* Unger**

1850b. Unger, p. 30, Pl. 6, Figs 3-4.
1963b. Palamarev, p. 71, Pl. 1, Fig. 5.
1967. Palamarev, p. 93.
1995. Palamarev & Staneva, p. 118, Pl. 2, Fig. 5.
1998. Palamarev & al., pp. 15, 19.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

***Myrica boveyana* (Heer) Chandler**

1957. Chandler, p. 90, Pl. 12, Figs 45, 48.
1964a. Palamarev, p. 15.
1970. Palamarev, p. 42, Pl. 7, Fig. 2.
1982. Palamarev, p. 15, Pl. 4, Figs 11-13.
1862. *Carpolithes boveyanus* Heer, p. 1077, Pl. 10, Figs 7-14.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Myrica ceriferiformis* Kownas**

1955. Kownas, p. 459, Figs-text 8a-b.
1987. Palamarev & Petkova, p. 82, Pl. 22, Figs 7-9.
Material: Ca.
Location and stratigraphical range: Gabare, Krivodol, Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Myrica concinna (Heer) Schimp.

1963b. Palamarev, p. 71, Pl. 1, Fig. 6.
Rev. 1987. *Engelhardia orsbergensis* (P. Wessel & C.O. Weber) Jähnichen, Mai & H. Walther; Palamarev & Petkova, p. 88, Pl. 24, Figs 1-3, 8.

Myrica deperdita Unger

1962. Hadžiev & Palamarev, p. 8, Fig.-text 1b.
Rev. 1987. *Quercus mediterranea* Unger; Palamarev & Petkova, p. 70, Pl. 18, Figs 5a-b.

***Myrica hakeaefolia* Unger**

1850b. Unger, p. 39, Pl. 20, Figs 7-10.
1937. Konstantinov, p. 261, Pl. 1, Fig. 10.
1964a. Palamarev, p. 13.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Myrica laevigata* (Heer) Saporta**

1889. Saporta, p. 3, Pl. 1, Fig. 2.
1932. Konjarov, p. 54, Pl. 19, Figs 1-2; p. 98, Pl. 25, Figs 4-6; p. 129, Pl. 39, Figs 1-2.
1937. Konstantinov, p. 262, Pl. 2, Figs 1-4.
1961. Palamarev, p. 179, Pl. 2, Figs 1-2; Fig.-text 5.
1987. Palamarev & Petkova, p. 81, Pl. 22, Figs 2a-b.
1998. Palamarev & al., p. 14.
1932. *M. lignitum* Unger; Konjarov, p. 228, Pl. 69, Fig. 1.
1964a. *M. sagoriana* Ettingsh.; Palamarev, p. 14, Pl. 4, Figs 2-3; Fig.-text 6.
1856. *Driandroides laevigata* Heer, p. 101, Pl. 99, Figs 5-8.
Material: Li.

Location and stratigraphical range: Tsareva Polyana (Continental formation, Lower Eocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Pelovo, Telish (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Myrica lignitum (Unger) Saporta s. str.

1865. Saporta, p. 102.
1932. Konjarov, p. 54, pars Pl. 18, Figs 3-4; p. 129, Pl. 39, Figs 4-7 [non p. 228, Pl. 69, Fig. 1 = *M. laevigata* (Heer) Saporta].
1937. Konstantinov, p. 261, Pl. 1, Figs 8-9.
1961. Palamarev, p. 179, Fig.-text. 4.
1963b. Palamarev, p. 93.
1964a. Palamarev, p. 13, Pl. 5, Fig. 1.
1975. Palamarev & Petkova, p. 207.
1984. Kitanov, p. 63, Fig. 14: 1.
1987. Palamarev & Petkova, p. 80, Pl. 22, Figs 1a-b.
1995. Palamarev & Staneva, p. 118.
1998. Palamarev & al., pp. 14-15.
1999b. Bozukov, p. 47, Pl. 1, Fig. 1.
1999b. Palamarev & al., p. 15, Pl. 4, Fig. 6.
1847. *Quercus lignitum* Unger, p. 113, Pl. 31, Figs 5-7.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Gozdyuvska Mahala (Gozdevitsa sandy-conglomerate Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Milchina Luka, Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Myrica lignitum (Unger) Saporta

1932. Konjarov, p. 228, Pl. 69, Fig. 1.
Rev. 1987. *Myrica laevigata* (Heer) Saporta; Palamarev & Petkova, p. 81, Pl. 22, Figs 2a-b.
1966. Petkova & Kitanov, p. 6, Pl. 1, Figs 4, 7.
Rev. 1987. *Engelhardia orsbergensis* (P. Wessel & C.O. Weber) Jähnichen, Mai & H. Walther; Palamarev & Petkova, p. 88, Pl. 24, Figs 1-3, 8.

Myrica longifolia Unger

1850b. Unger, p. 29, Pl. 6, Fig. 2; Pl. 7, Fig. 1.
1962. Kitanov & Palamarev, p. 6, Fig. 1.
1964a. Palamarev, p. 14, Pl. 4, Fig. 1; Fig.-text 7.
1966. Palamarev & Petkova, p. 50.
1967. Palamarev, p. 93.
1999a. Palamarev & al., p. 33, Pl. 3, Fig. 9.
1999b. Palamarev & al., p. 15, Pl. 5, Fig. 4.
2001. Palamarev & al., p. 288.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Selcha (Devin Formation, Upper Eocene-Lower Oligocene); Belitsa (Sandstone and sandy argillaceous formation, Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Myrica minima Negru

1970. Negru in Dorofeev & Negru, p. 503, Pl. 1, Figs 7-9.
1994a. Palamarev, p. 139, Pl. 1, Fig. 10.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

Myrica onocleaefolia Andr.

1955. Andreánszky, p. 40, Pl. 2, Fig. 7.
1962b. Palamarev, p. 17.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Upper Oligocene).
Collection: IB (BAS).

Myrica palaeogale Pilar

1883. Pilar, p. 33, Pl. 7, Figs 6, 8.
1988. Palamarev & Kitanov, p. 194, Pl. 11, Fig. 5.
Material: Li.

Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Myrica sagoriana Ettingsh.

1964a. Palamarev, p. 14, Pl. 4, Figs 2-3; Fig.-text 6.
Rev. 1987. *Myrica laevigata* (Heer) Saporta; Palamarev & Petkova, p. 81, Pl. 22, Figs 2a-b.

***Myrica salicina* Unger**

1850a. Unger, p. 366.
1964a. Palamarev, p. 13, Fig.-text 5.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Myrica suppani* Kirchh.**

1938. Kirchheimer, p. 326, Pl. 3, Figs 13-18.
1971. Palamarev, p. 156, Pl. 22, Figs 4, 6.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Myrica vindobonensis* (Ettingsh.) Heer**

1859. Heer, p. 176, Pl. 150, Figs 16-17.
1963b. Palamarev, p. 72, Pl. 1, Fig. 7.
1967. Palamarev, p. 93.
1851. *Dryandra vindobonensis* Ettingsh.; Ettingshausen, p. 16, Pl. 3, Fig. 6.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Myrica* sp.**

1996. Uzunova, p. 30, Pl. 3, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

MYRIOPHYLLUM L. – HALORRHAGACEAE

***Myriophyllum verticillatum* L. foss.**

1965. Palamarev, p. 141, Pl. 2, Fig. 26; Pl. 4, Figs 30-36.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

MYRSINE L. – MYRSINACEAE

***Myrsine celastroides* Ettingsh.**

1853. Ettingshausen, p. 60, Pl. 21.
1963b. Palamarev, p. 78, Pl. 2, Fig. 24.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***"Myrsine" doryphora* Unger**

1850a. Unger, p. 434.
1964a. Palamarev, p. 32, Fig.-text 47.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Myrsine* is questionable.

MYRTUS L. – *MYRTACEAE*

***Myrtus palaeomestensis* Palam., Kitan. fil. & Bozukov** (Plate III, Fig. 4).

1999a. Palamarev & al., p. 34, Pl. 3, Figs 1-2.
Holotypus: Pl. 3, Fig. 2, (N BlB-290), Palamarev & al. (1999a).
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

***Myrtus rectinervis* Saporta**

1863. Saporta, p. 97, Pl. 11, Fig. 5.
1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

NELUMBO Adans. – NELUMBONACEAE

***Nelumbo protospeciosa* Saporta**

1891. Saporta, p. 17, Pl. 1, Figs 2-3; Pl. 4, Figs 1-2.

1964a. Palamarev, p. 18, Pl. 9, Fig. 1.
1984. Kitanov, p. 53, Fig. 7.4.
1990. Kitanov, p. 89, Fig. 1.
1998. Palamarev & al., pp. 15, 19.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); East Maritsa basin – Troyanovo (Maritsa Formation, Dacian – Romanian); Gurmen (Nevrokop Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

NEOLITSEA (Benth.) Merrill – LAURACEAE

Neolitsea apicifolia (Saporta & Marion) Palam.

2001. Palamarev in Palamarev & al., p. 281, Pl. 2, Fig. 6.
1878. *Oreodaphne apicifolia* Saporta & Marion, Pl. 9, Fig. 10.
1988. *Ocotea apicifolia* (Saporta & Marion) Takht.; Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

Neolitsea magnifica (Saporta) Takht.

1974. Takhtajan, p. 41, Pl. 17, Fig. 3; Fig.-text 16.
1998. Palamarev & al., pp. 15-19.
1998b. Bozukov, p. 7, Pl. 3, Fig. 3.
1999a. Palamarev & al., p. 31, Pl. 1, Fig. 11.
1995. *Neolitsea* cf. *magnifica* (Saporta) Takht.; Palamarev & Staneva, p. 117, Pl. 1, Fig. 1.
1865. *Litsea magnifica* Saporta, p. 136, Pl. 7, Fig. 6.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Neolitsea palaeosericea Takht.

1963. Takhtajan, p. 202, Pl. 6, Figs 5-7.
1988. Černjavska & al., p. 30, Pl. 3, Fig. 3.
1998b. Bozukov, p. 6, Pl. 2, Fig. 1.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Strazha (Smolyan Formation, Upper Eocene–Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

NERIUM L. – APOCYNACEAE

Nerium oleander L. foss.

1963. Jordanov & Kitanov, p. 34, Pl. 4, Figs 1-3; Figs-text 7.1-4.
1987. Palamarev & Petkova, p. 141, Pl. 36, Fig. 6.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

NUPHAR A. Sm. – NYMPHAEAECEAE

Nuphar canaliculata C. & E. Reid

1915. Reid & Reid, p. 86, Pl. 7, Figs 1-3.
1970. Palamarev, p. 40, Pl. 1, Fig. 9.
1982. Palamarev, p. 9, Pl. 3, Figs 7-8.
1987. Palamarev & Petkova, p. 44, Pl. 13, Figs 3, 5.
Material: Ca.
Location and stratigraphical range: Drenovets, Gabare, Krivodol (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Nuphar macrosperma Dorof.

1963. Dorofeev, p. 174, Pl. 27, Figs 5-6.
1989. Palamarev, p. 48, Pl. 2, Fig. 4.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing Formation, Middle Miocene).
Collection: IB (BAS).

Nuphar aff. *sagittifolia* Pursh

1973. Palamarev, p. 80, Pl. 1, Figs 12-13.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Nuphar tanaitica* Dorof.**

1974d. Dorofeev, p. 82, Pl. 110, Figs 4-5; Pl. 113, Figs 5-8; Figs-text 48.1-5.
1982. Palamarev, p. 9, Pl. 3, Figs 4-6.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

NYMPHAEA L. – NYMPHAEACEAE

***Nymphaea calophylla* Saporta**

1867. Saporta, p. 97, Pl. 11, Figs 1-3.
1998. Palamarev & al., pp. 15, 19.
1999b. Palamarev & al., p. 12, Pl. 9, Figs 4-5.
Material: Li.
Location and stratigraphical range: Bobovdol (Coal-bearing formation, Upper Oligocene); Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Nymphaea* sp.**

1999b. Palamarev & al., p. 12, Pl. 6, Figs 5-6.
Material: Ca.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

NYSSA L. – NYSSACEAE

***Nyssa disseminata* (Ludw.) Kirchh.**

1937. Kirchheimer, p. 916, Fig. 11.
1987. Palamarev & Petkova, p. 125, Pl. 31, Figs 5, 7.
1857. *Pinus disseminata* Ludw.; Ludwig, p. 89, Pl. 20, Figs 2a-g.
Material: Li.
Location and stratigraphical range: Drenovets, Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Nyssa rottensis* Weyland**

1938. Weyland, p. 78.
1963b. Palamarev, p. 83, Pl. 3, Fig. 39.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

OCOTEA Aubl. – LAURACEEAE

Ocotea apicifolia (Saporta & Marion) Takht.

1988. Černjavska & al., p. 30.
Rev. 2001. *Neolitsea apicifolia* (Saporta & Marion) Palam.; Palamarev & al., p. 280, Pl. 2, Fig. 6.

***Ocotea gracilis* Saporta**

1889. Saporta, p. 7, Figs 6-7.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argilaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

***Ocotea heeri* (Gaudin) Takht.**

1963. Takhtajan, p. 199.
1982. Kitanov, p. 37, Pl. 1, Fig. 4.
1987. Palamarev & Petkova, p. 36, Pl. 10, Figs 3, 6, 8.
1995. Palamarev & Staneva, p. 117.
1858. *Oreodaphne heeri* Gaudin in Gaudin & Strozzi, p. 35, Pl. 10, Figs 5-9; Pl. 11, Figs 1-7.
1932. Konjarov, p. 167, Pl. 56, Figs 5-5a.
1956. Kitanov & Nikolova, p. 99, Pl. 6, Fig. 2; Fig.-text 14.
1966. Petkova & Kitanov, p. 14, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Rouzhintsi, Tolovitsa (Krivodol Formation, Volhynian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Ocotea kryshtofovichii* (Vassilevskaja) Imkhan.**

1974. Imkhanitskaya, p. 26, Pl. 12, Figs 7-9.
1988. Černjavska & al., p. 30, Pl. 2, Fig. 5.
1995. Palamarev & Staneva, p. 117.
2001. Palamarev & al., p. 282.
1957. *Cinnamomum kryshtofovichii* Vassilevskaja, p. 148, Pl. 4, Figs 10-16; Fig.-text 13.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower

Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

***Ocotea laurifolia* Vassilevskaja**

1957. Vassilevskaja, p. 150, Pl. 2, Fig. 4; Fig.-text 14.
1999a. Palamarev & al., p. 31, Pl. 1, Fig. 9.
1999b. Palamarev & al., p. 10.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene-Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

Ocotea macrostoma (Weyland & Kilpper) Uzunova & Stojanova

1999. Uzunova & Stojanova, p. 10, Pl. 2, Figs 1-4.
Rev. 2002. *Laurophyllum pseudoprinceps* Weyland & Kilpper s.l.; Kvaček & al., p. 57.

***Ocotea oblanceolata* Palam. & Petkova** (Plate IV, Fig. 7).

1987. Palamarev & Petkova, p. 37, Pl. 11, Figs 1-6.
1966. *Ficus* sp., Petkova & Kitanov, p. 10, Pl. 3, Fig. 1; Pl. 7, Fig. 3, det. Palamarev & Petkova, 1987.
Holotypus: Pl. 11, Fig. 1, (N R-3534), Palamarev & Petkova (1987).
Material: Cu, Li.
Location and stratigraphical range: Rouzhintsi, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Ocotea pseudoprinceps (Weyland & Kilpper) Uzunova & Stojanova

1999. Uzunova & Stojanova, p. 9, Pl. 1, Figs 1-5
Rev. 2002. *Laurophyllum pseudoprinceps* Weyland & Kilpper s.l.; Kvaček & al., p. 57.

Ocotea undulata (Weyland & Kilpper) Uzunova & Stojanova

1999. Uzunova & Stojanova, p. 10, Pl. 2, Figs 3-6.
Rev.: 2002. *Laurophyllum pseudoprinceps* Weyland & Kilpper s.l.; Kvaček & al., p. 57.

OENANTHE L. – APIACEAE

***Oenanthe aquatica* (L.) Poir. foss.**

1982. Palamarev, p, 20, Pl. 6, Fig. 4.
1994a. Palamarev, p. 144, Pl. 4, Fig. 5.
Material: Ca.
Location and stratigraphical range: Sofia basin – Kutina (Gnilyane Formation, Lower Pontian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

OLEA L. – OLEACEAE

***Olea europaea* L. var. *oleaster* DC.**

1929. Stojanoff & Stefanoff, p. 90, Fig. 8; Pl. 11, Fig. 17; Fig.-text 23.
1935. Stefanov & Jordanov, p. 74, Fig. 81.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Olea notii* Unger**

1847. Unger, p. 62, Pl. 10, Figs 1-12.
1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

OMALANTHUS A. Juss. – EUPHORBIACEAE

***Omalanthus paraeuxinus* Palam.**

1973. Palamarev, p. 83, Pl. 2, Figs 19-20; Pl. 3, Figs 1, 3.
Holotypus: Pl. 2, Fig. 20; Pl. 3, Fig. 3, Palamarev (1973).
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearig formation, Priabonian).
Collection: IB (BAS).

OREODAPHNE T. Nees & Mart. – LAURACEAE

Oreodaphne heeri Gaudin

1932. Konjarov, p. 167, Pl. 56, Fig. 5.
1956. Kitanov & Nikolova, p. 99, Pl. 6, Fig. 2; Fig.-text 14.
1966. Petkova & Kitanov, p. 14, Pl. 4, Fig. 2.
Rev. 1987. *Ocotea heeri* (Gaudin) Takht.; Palamarev & Petkova, p. 36, Pl. 10, Figs 3, 6, 8.

OREOPANAX Decne & Planch. – ARALIACEAE

***Oreopanax protomulticaulis* (Rasky) Hably**

1983. Hably, p. 116, Pl. 33, Fig. 4; Pl. 34, Figs 1-3; Pl. 35, Fig. 4; Fig.-text 25.
2000. Bozukov, p. 15, Pl. 1, Fig. 5.
1959. *Schefflera protomulticaulis* Rasky, p. 459, Pl. 69, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

OSMANTHUS Lour. – OLEACEAE

***Osmanthus* sp. aff. *O. americana* Benth. & Hook.**

1935. Stefanov & Jordanov, p. 74, Fig. 32; Pl. 24, Fig. 8.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

OSTRYA Scop. – BETULACEAE

***Ostrya angustifolia* Andr.**

1959a. Andreánszky, p. 91, Pl. 23, Fig. 5; Pl. 24, Fig. 2; Fig.-text 72.
1987. Palamarev & Petkova, p. 79, Pl. 21, Fig. 8.
1999a. Bozukov, p. 11, Pl. 3, Fig. 4
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Ostrya atlantidis* Unger**

1850a. Unger, p. 408.
1999a. Bozukov, p. 11, Pl. 3, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Ostrya carpinifolia* Scop. foss.**

1984. Kitanov, p. 56, Fig. 10.1.
1999a. *Ostrya* aff. *carpinifolia* Scop.; Bozukov, p. 11, Pl. 4, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Ostrya kryshtofovichii* Baikovskaja**

1965. Baikovskaja in Kryshtofovich & Baikovskaja, p. 46, Pl. 9, Fig. 2; Pl. 10, Figs 12-13; Fig.-text 19.
1999a. Bozukov, p. 12, Pl. 1, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

OXYLOBIUM Andr. – FABACEAE

***Oxylobium pultaenaeoides* Ettingsh.**

1858. Ettingshausen, p. 73, Pl. 4, Fig. 3.
1964a. Palamarev, p. 25.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

PALAEOEURYALE Dorof. – NYMPHAEACEAE

***Palaeoeuryale nodulosa* (C. & E. Reid) Dorof.**

1974d. Dorofeev, p. 72.
1987. Palamarev & Petkova, p. 45, Pl. 13, Figs 4, 6.
1915. *Euryale nodulosa* C. & E. Reid, p. 87, Pl. 7, Figs 8-10.
Material: Ca.
Location and stratigraphical range: Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

PALAEOLOBIUM Unger – FABACEAE

***Palaeolobium sotzkianum* Unger**

1850b. Unger, p. 56, Pl. 41, Figs 6-7.
1964a. Palamarev, p. 25, Fig.-text 25.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Palaeolobium radobojense* Unger**

1850b. Unger, p. 57, Pl. 41, Fig. 11

1964a. Palamarev, p. 25, Fig.-text 26.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

PALAEONYMPHEA Chandler – NYMPHAEACEAE

***Palaeonymphea eocenica* Chandler**

1962. Chandler, p. 60, Pl. 7, Figs 19-20.
1973. Palamarev, p. 79, Pl. 1, Figs 10-11.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

PALIURUS Mill. – RHAMNACEAE

***Paliurus favonii* Unger**

1847. Unger, p. 147, Pl. 50, Fig. 6.
1997. Mai & Palamarev, p. 491, Pl. 3, Figs 10-11.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Paliurus ovoides* (Göpp.) Heer**

1859. Heer, p. 76, Pl. 121, Figs 58-59; Pl. 122, Fig. 30.
1987. Palamarev & Petkova, p. 137, Pl. 35, Fig. 2.
1972. *P. spina-christi* Mill. foss.; Kitanov, p. 178, Pl. 2, Fig. 3.
1984. Kitanov, p. 65, Fig. 12.2.
1855. *Ceanothus ovoides* Göpp.; Göppert, p. 36, Pl. 22, Fig. 3.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Dulgo Pole (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Paliurus spina-christi Mill.

1972. Kitanov, p. 178, Pl. 2, Fig. 3.
1984. Kitanov, p. 65, Fig. 12.2.
Rev. 1987. *Paliurus ovoides* (Göpp.) Heer; Palamarev & Petkova, p. 137, Pl. 35, Fig. 2.

***Paliurus tiliaefolius* (Unger) Bůžek**

1971. Bůžek, p. 74, Pl. 33, Figs 1-21; Pl. 34, Figs 1-17.
2000. Bozukov, p. 24, Pl. 4, Fig. 3.
1847. *Ceanothus tiliaefoliuss* Unger, p. 143, Pl. 49, Figs 1-6.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

PANAX L. – ARALIACEAE

***Panax longissimum* Unger**

1850b. Unger, p. 44, Pl. 24, Figs 21-23.
1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

PARROTIA C.A. Mey. – HAMAMELIDACEAE

Parrotia fagifolia Göpp.

1932. Konjarov, p. 54, Pl. 23, Figs 2-3; p. 98, Pl. 24, Figs 6-7.
1937. Konstantinov, p. 265, Pl. 3, Figs 3-5.
Rev. 1998. *Parrotia pristina* (Ettingsh.) Stur; Palamarev & al., p. 14.

***Parrotia pristina* (Ettingsh.) Stur**

1867. Stur, p. 192, Pl. 5, Figs 2-3.
1988. Palamarev & Kitanov, p. 186, Pl. 4, Fig. 10.
1998. Palamarev & al., pp. 14-15.
1998b. Bozukov, p. 9, Pl. 2, Fig. 5.
1932. *P. fagifolia* Göpp.; Konjarov, p. 54, Pl. 23, Figs 2-3; p. 98, Pl. 24, Figs 6-7.
1937. Konstantinov, p. 265, Pl. 3, Figs 3-5.
1935. *P. persica* C.A. Mey.; Stefanov & Jordanov, p. 54, Pl. 20, Figs 2-3; Fig.-text 50.
1851. *Styrax pristinum* Ettingsh.; Ettingshausen, p. 19, Pl. 3, Fig. 9.
Material: Li.
Location and stratigraphical range: Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Beli breg coal basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***PARTHENOCISSUS* Planch. – VITACEAE**

***Parthenocissus britannica* (Heer) Chandler**

1957. Chandler, p. 103, Pl. 15, Figs 119-120.
1971. Palamarev, p. 159, Pl. 23, Figs 1-2, 4.
1987. Palamarev & Petkova, p. 140, Pl. 36, Fig. 3.
1994b. Palamarev, p. 30, Pl. 4, Figs 2-4.
1862. *Vitis britannica* Heer, p. 1071, Pl. 68, Figs 25-26.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene); Slavotin (Krivodol Formation, Volhynian), Drenovets (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

PASANIA Oerst. – FAGACEAE

Pasania sp. aff. *P. leucostachya* A. Camus

1963b. Palamarev, p. 93.
Rev. *Pasaniopsis* sp. 1, Palamarev, hoc loco.
1964b. Palamarev, p. 130, Pl. 3, Fig. 1.
Rev. 1998. *Pasaniopsis vittata* (Saporta & Marion) Palam. & Mai, p. 246.

Pasania sp. aff. *P. cuspidata* Oerst.

1934. Stefanov & Jordanov, p. 17.
Rev. *Pasaniopsis* sp. 2, Palamarev, hoc loco.

Pasania sp. aff. *P. glabra* Oerst.

1929. Stojanoff & Stefanoff, p. 49, Fig. 5; Pl. 6, Figs 1-4; Fig.-text 13.
Rev. *Pasaniopsis* sp. 3, Palamarev, hoc loco.

***PASANIOPSIS* Saporta & Marion – FAGACEAE**

***Pasaniopsis decurrens* (Andr. & Kovács) Palam. & Mai**

1998. Palamarev & Mai**,** p. 246,
1964. *Lithocarpus decurrens* Andr. & Kovács; Andreánszky & Kovács, p. 12, Pl. 1, Fig. 2; Figs-text 3-4.
1987. Palamarev & Petkova, p. 66, Pl. 17, Fig. 6.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Pasaniopsis vittata* (Saporta & Marion) Palam. & Mai**

1998. Palamarev & Mai, p. 246.
2001. Palamarev & al., p. 286, Pl. 2, Fig. 3.
1873. *Dryophyllum vittatum* Saporta & Marion, p. 43, Pl. 1, Fig. 4.
1964b. *Pasania* sp.; Palamarev, p. 130, Pl. 3, Fig. 1.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Pasaniopsis* sp. 1**

1963b. *Pasania* sp. aff. *P. leucostachya* A. Camus; Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Pasaniopsis* sp. 2**

1934. *Pasania* sp. aff. *P. cuspidata* Oerst.; Stefanov & Jordanov, p. 17.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Pasaniopsis* sp. 3**

1929. *Pasania* sp. aff. *P. glabra* Oerst.; Stojanoff & Stefanoff, p. 49, Fig. 5; Pl. 6, Figs 1-4; Fig.-text 13.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***PASSIFLORA* L. – PASSIFLORACEAE**

***Passiflora kirchheimeri* Mai subsp. *bulgarica* Palam.**

1971. Palamarev, p. 156, Pl. 22, Figs 5, 7; Pl. 24, Figs 16-18.
Holotypus: Pl. 22, Fig. 7; Pl. 24, Fig. 17, Palamarev (1971).
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

PERIPLOCA L. – ASCLEPIADACEAE

***Periploca graeca* L. foss.**

1987. Palamarev & Petkova, p. 142, Pl. 36, Fig. 4.
Material: Li.
Location and stratigraphical range: Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Periploca* cf. *kryshtofovichii* Kornil.**

1960. Kornilova, p. 80, pars Pl. 8.6-12; Pl. 18.10 (non Pl. 13.3-4).
1975. Palamarev & Petkova, p. 215, Pl. 1, Fig. 5; Pl. 6, Fig. 1.
Material: Li.
Location and stratigraphical range: Gabrovo (Finegraned sandstone lyers, Priabonian – Lower Oligocene).
Collection: IB (BAS).

PERSEA Mill. – LAURACEAE

***Persea belenensis* Watelet**

1866. Watelet, p. 39, Pl. 51, Figs 2-4, 7.
1999b. Palamarev & al., p. 11, Pl. 3, Fig. 1.
Material: Cu, Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Persea braunii* Heer**

1856. Heer, p. 80, pars Pl. 89, Figs 9-10 (non Fig. 6-8 = *Lauraceae* fruct.).
1935. Stefanov & Jordanov, p. 49, Pl. 17, Figs 4-5; Fig.-text 46.
1964a. Palamarev, p. 23.
1966. Petkova & Kitanov, p. 13, Pl. 3, Fig. 4.
1967. Petkova, p. 145, Pl. 6, Figs 3-5; Pl. 12, Fig. 9.
1987. Palamarev & Petkova, p. 35, Pl. 9, Fig. 6; Pl. 12, Figs 1, 5-7.
1998b. Bozukov, p. 7, Pl. 4, Fig. 5.
1999b. Palamarev & al., p. 11.
Material: Cu, Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Pelovo, Rouzhintsi (Krivodol Formation, Volhynian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Persea palaeomorpha* Saporta & Marion**

1878. Saporta & Marion, p. 64, Pl. 10, Fig. 1.
1988. Černjavska & al., p. 30, Pl. 2, Fig. 4.
1995. Palamarev & Staneva, p. 117, Pl. 1, Fig. 3.
1999b. Palamarev & al., p. 11, Pl. 3, Fig. 4.
2001. Palamarev & al., p. 282, Pl. 2, Fig. 4.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

***Persea pliocenica* (Laurent) Kolak.**

1957. Kolakovsky, p. 276, Pl. 16, Figs 2-3.
1984. Kitanov, p. 51, Fig. 7.1.
1987. Palamarev & Petkova, p. 36, Pl. 9, Fig. 3; Pl. 12, Figs 2-4.
1904. *P. indica* (L.) Spreng. *pliocenica* Laurent, p. 152, Fig. 26.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Persea princeps* (Heer) Schimp.**

1870. Schimper, p. 831.
1937. Konstantinov, Pl. 6, Fig. 1, sub sp. indet. det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14. Pl. 1.
1962. Kitanov & Palamarev, p. 8, text-Fig. 3; Pl. 5, Fig. 1.
1966. Petkova & Kitanov, p. 12, Pl. 3, Figs 2, 5; Pl. 7, Fig. 5; Pl. 8, Fig. 5.
1987. Palamarev & Petkova, p. 34, Pl. 9, Fig. 1.
1988. Černjavska & al., p. 30.
1995. Palamarev & Staneva, p. 117.
1998. Palamarev & al., pp. 14-15.
1998b. Bozukov, p. 7, Pl. 3, Fig. 4.
1999a. Palamarev & al., p. 31, Pl. 1, Fig. 7.

1999b. Palamarev & al., p. 11, Pl. 3, Fig. 5.
1856. *Laurus princeps* Heer, p. 77, pars Pl. 89, Figs 16-17; Pl. 90, Fig. 20 (non Fig. 17 – *Laurus* sp.).
1964a. Palamarev, p. 20, Pl. 7, Figs 1-2; Pl. 8, Fig. 1.
1967. Petkova, p. 145, Pl. 5, Fig. 8; Pl. 12, Fig. 5.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Pelovo, Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Persea protobalcanica* Palam.** (Plate I, Fig. 5).

2001. Palamarev in Palamarev & al., p. 282, Pl. 3, Fig. 2; Pl. 4, Figs 3-4.
Holotypus: Pl. 4, Fig. 3, (N SmB-86), Palamarev & al. (2001).
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

PERSICARIA Mill. – POLYGONACEAE

***Persicaria lapathifolia* (L.) Gray foss.**

1970. Palamarev, p. 43, Pl. 1, Figs 12-18.
1982. Palamarev, p. 16, Pl. 5, Fig. 3.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

PHELLODENDRON Rupr. – RUTACEAE

***Phellodendron lusaticum* Kirchh.**

1940. Kirchheimer, p. 281, Fig.-text 2.
1997. Mai & Palamarev, p. 489, Pl. 3, Figs 3-4.
Material: Ca.
Location and stratigraphical range: Elhovo basin – Izgrev (Elhovo Formation, Pontian); West Maritsa basin – Mericleri II (Upper Maritsa Formation, Middle Miocene-Maeotian).
Collection: IB (BAS).

***Phellodendron* sp.**

1963b. Palamarev, p. 83, Pl. 3, Fig. 40.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

PHOEBE T. Nees – LAURACEAE

***Phoebe boehlensis* Mai**

1971. Mai, p. 46, Pl. 7, Figs 7-13.
1989. Palamarev, p. 47, Pl. 2, Fig. 3.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Phoebe cervarensis* Bataller & Depape**

1950. Bataller & Depape, p. 33, Pl. 3, Figs 1-3; Fig.-text 10.
1988. Černjavska & al., p. 30.
1995. Palamarev & Staneva, p. 117.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Phoebe* aff. *elongata* (Vahl) T. Nees**

1998b. Bozukov, p. 7, Pl. 1, Fig. 2.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene)
Collection: IB (BAS).

***Phoebe integriuscula* (Heer) Hantke**

1954. Hantke, p. 70, Pl. 11, Figs 7-8.
1962. Hadžiev & Palamarev, p. 9, Fig. 2a.
1859. *Carya integriuscula* Heer, p. 93, Pl. 131, Fig. 18.
Material: Li.
Location and stratigraphical range: Montana (Blagovska Formation, Volhynian).
Collection: Unkown.

PHYSALIS L. – SOLANACEAE

***Physalis* aff. *alkenengi* L.**

1970. Palamarev, p. 54, Pl. 4, Figs 11-12.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

PIERIS D. Don – ERICACEAE

***Pieris* sp. aff. *P.* (*Andromeda*) *nitida* Benth. & Hook.**

1935. Stefanov & Jordanov, p. 69, Fig.-text 72.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

PILEA Lindl. – URTICACEAE

***Pilea cantalensis* (E. Reid) Dorof.**

1963. Dorofeev, p. 164, Pl. 25, Figs 22-27; Fig.-text 24.8-10.
1968. Palamarev, p. 202, Pl. 40, Fig. 6-8.
1970. Palamarev, p. 41.
1987. Palamarev & Petkova, p. 61, Pl. 15, Figs 5a-b, 6.
1923. *P. pumila* (L.) Gray var. *cantalensis* E. Reid, p. 317, Pl. 10, Fig. 6.
Material: Ca.
Location and stratigraphical range: Gabare, Krivodol, Slavotin (Krivodol Formation, Volhynian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

***Pilea* aff. *glaberrima* Blume**

1973. Palamarev, p. 82, Pl. 2, Figs 5-6.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

PIMELEA Banks & Saland. – THYMELEACEAE

***Pimelea crassipes* Heer**

1856. Heer, p. 94, Pl. 90, Figs 12-14.
1963b. Palamarev, p. 77, Pl. 2, Fig. 22.
1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

PISONIA L. – NYCTAGINACEAE

***"Pisonia" eocenica* Ettingsh.**

1853. Ettingshausen, p. 43, Pl. 11, Figs 1-22.
1963b. Palamarev, p. 75. Pl. 2, Fig. 14.
1967. Palamarev, p. 97.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Pisonia* is questionable.

PISTACIA L. – ANACARDIACEAE

***Pistacia aquensis* Saporta**

1863. Saporta, p. 117, Pl. 15, Figs 1-24.
1999b. Palamarev & al., p. 18, Pl. 7, Fig. 7.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Pistacia* cf. *oligocaenica* Marion**

1995. Palamarev & Staneva, p. 119, Pl. 3, Fig. 5.
1872. *P. oligocaenica* Marion, p. 353, Pl. 23, Figs 30-36.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

***Pistacia reddita* Saporta**

1862. Saporta, p. 277, Pl. 13, Fig. 2.
1963b. Palamarev, p. 76, Pl. 2, Fig. 19.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Pistacia terebinthus* L.**

1935. Stefanov & Jordanov, p. 61, Pl. 20, Fig. 6; Fig.-text 59.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Daciaan).
Collection: Unkown.

PLATANUS L. – PLATANACEAE

Platanus aceroides Göpp.

1956. Kitanov & Nikolova, p. 103, Pl. 6, Fig. 1; Fig.-text 16.
1962. Kitanov & Palamarev, p. 9, Pl. 6, Figs 1-2; Figs-text 4-5.
1964a. Palamarev, p. 24.
Rev. 1987. *Platanus platanifolia* (Ettingsh.) Knobloch; Palamarev & Petkova, p. 52, Pl. 15, Fig. 2.

***Platanus lineariloba* Kolak.**

1955. Kolakovsky, p. 264, Pl. 15, Fig. 1.
1987. Palamarev & Petkova, p. 53, Pl. 14, Fig. 3.
Material: Li.
Location and stratigraphical range: Karbintsi, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Platanus neptuni* (Ettingsh.) Bůžek, Holý & Kvaček**

1967. Bůžek & al., p. 303, Pl. 4, Figs 1-6.
1995b. Uzunova, p. 5, Pl. 2, Figs 1-4.
1995. Palamarev & Staneva, p. 122, Pl. 4, Figs 2-3, 4.
1998. Palamarev & al., pp. 15, 19.
1999a. Palamarev & al., p. 32.
1999b. Palamarev & al., p. 12, Pl. 3, Fig. 3.
1866. *Sparganium neptuni* Ettingsh.; Ettingshausen, p. 31, Pl. 7, Figs 9-15.
Material: Cu, Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Platanus platanifolia* (Ettingsh.) Knobloch**

1964. Knobloch, p. 601.
1984. Kitanov, p. 53, Fig. 8.1.
1987. Palamarev & Petkova, p. 52, Pl. 15, Fig. 2.
1995. Palamarev & Staneva, p. 118, Pl. 4, Figs 1, 4.
1998. Palamarev & al., p. 15.
1956. *P. aceroides* Göpp.; Kitanov & Nikolova, p. 103, Pl. 6, Fig. 1; Fig.-text 16.
1962. Kitanov & Palamarev, p. 9, Pl. 6, Figs 1-2; Figs-text 4-5.
1964a. Palamarev, p. 24.
1851. *Cissus platanifolia* Ettingsh.; Ettingshausen, p. 20, Pl. 4, Fig. 1.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene – Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Gabrovnitsa, Rouzhintsi (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Lozenets (Lozenets Formation, Romanian);
Collection: IB (BAS).

***Platanus schimperi* (Heer) Saporta & Marion**

1885. Saporta & Marion, p. 207.
1988. Černjavska & al., p. 30.
1995. Palamarev & Staneva, p. 117.
1859. *Acer schimperi* Heer, p. 313.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

PLATYCARYA Siebold & Zucc. – JUGLANDACEAE

***Platycarya palaeostrobilacea* Palam.**

1964b. Palamarev, p. 129, Pl. 2, Fig. 1.
1967. Palamarev, p. 94.
1972. Kitanov, p. 176, Pl. 4, Fig. 1.
Holotypus: Pl. 2, Fig. 1, (N B-4192), Palamarev (1964b).
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

PLEIOMERIS DC. – MYRSINACEAE

***Pleiomeris formosa* (Heer) Palam. & Petkova**

1987. Palamarev & Petkova, p. 105, Pl. 28, Fig. 3.
1861. *Myrsine formosa* Heer, p. 12, Pl. 6, Fig. 6; Pl. 8, Figs 10-11.
1966. *Ficus multinervis* Heer; Petkova & Kitanov, p. 11, Pl. 2, Fig. 4.
1967. Palamarev, p. 93.
Lectotypus: 1861. Heer, Pl. 6, Fig. 6, selected by Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Pelovo, Rouzhintsi, Shishmanovo, Stavertsi, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

PLUMERIA L. – APOCYNACEAE

***Plumeria* cf. *caucasica* Avakov**

1994. Palamarev & Petkova, p. 36, Pl. 1, Fig. 2; Pl. 2, Fig. 7.
1995. Palamarev & Staneva, p. 119, Pl. 3, Fig. 8.
1998. Palamarev & al., pp. 15, 19.
1999a. Palamarev & al., p. 39, Pl. 3, Figs 3, 7.
1979. *P. caucasica* Avakov, p. 72, Pl. 24, Figs 5-6; Pl. 25, Figs 1-6; Pl. 26, Fig. 1; Pl. 27, Figs 2-3; Fig.-text 9.
Material: Li.
Location and stratigraphical range: Souhostrel (Souhostrel Formation, Lower Eocene); Pavelsko (Pavelsko Sandy argillaceous formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

PODOGONIUM Heer – FABACEAE

Podogonium knorrii Heer

1967. Petkova, p. 145, pars Pl. 6, Fig. 6 [non Fig. 4; Pl. 16, Fig. 6 = *Gleditsia lyelliana* (Heer) Hantke].
Rev. 1987. *Sophora europaea* Unger; Palamarev & Petkova, p. 112, Pl. 30, Fig. 8.

1964a. Palamarev, p. 24, Pl. 11, Fig. 2; Fig.-text 24.
1967. Palamarev, p. 95.
1967. Petkova, p. 145, Pl. 6, Fig. 7 (non Fig. 6 = *Sophora europaea* Unger); Pl. 13, Fig. 6.
1975. Palamarev & Petkova, p. 208.
Rev. 1987. *Gleditsia lyelliana* (Heer) Hantke; Palamarev & Petkova, p. 114, Pl. 30, Figs 9-12.

Podogonium latifolium Heer

1937. Konstantinov, p. 266, Pl. 4, Fig. 14.
Rev. 1987. *Gleditsia lyelliana* (Heer) Hantke; Palamarev & Petkova, p. 114, Pl. 30, Figs 9-12.

POLYCNEMUM L. – CHENOPODIACEAE

***Polycnemum* aff. *arvense* L.**

1994a. Palamarev, p. 137, Pl. 2, Figs 10-11.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

POLYGONUM L. – POLYGONACEAE

***Polygonum leporimontanum* Kirchh.**

1942. Kirchheimer, p. 432, Fig.-text 9.
1994b. Palamarev, p. 27, Pl. 5, Fig. 1.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Polygonum neogenicum* Negru**

1979. Negru, p. 65, Pl. 11, Figs 11-13.

1994a. Palamarev, p. 138, Pl. 2, Fig. 6.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian); Ognyanovo (Baldevo Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Polygonum vladichenicum* Negru**

1979. Negru, p. 67, Pl. 12, Figs 2-3.
1994a. Palamarev, p. 138, Pl. 2, Figs 8-9.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

POLYSPORA Laff. – THEACEAE

***Polyspora kunzii* (Heer) Knobloch & Kvaček**

1996. Knobloch & Kvaček, p. 93, Pl. 33, Fig. 7; Figs-text 42 e-f, h-j.
2001. Palamarev & al., p. 290.
1861. *Personia kunzii* Heer, p. 415, Pl. 8, Fig. 22.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

POPULUS L. – SALICACEAE

***Populus alba* L.**

1929. Stojanoff & Stefanoff, p. 28, Pl. 4, Figs 5-6; Figs-text 7.4, 6.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Populus alba-pliocenica* Saporta**

1876. Saporta in Saporta & Marion, p. 38, Pl. 24, Figs 11-12.
1987. Palamarev & Petkova, p. 97, Pl. 25, Fig. 6.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Smirnenski (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Populus balsamoides* Göpp.**

1855. Göppert, p. 23, Pl. 15, Figs 3, 6; Pl. 16, Figs 3-5.
1932. Konjarov, p. 54, Pl. 16, Fig. 1; p. 98, Pl. 25, Fig. 3.
1937. Konstantinov, p. 261, Pl. 2, Fig. 9.
1964a. Palamarev, p. 13.
1975. Palamarev & Petkova, p. 207.
1992. Bozukov & Palamarev, p. 12, Pl. 9, Figs 1-2; Pl. 6, Fig. 2; Pl. 7, Fig. 1.
1998. Palamarev & al., pp. 14-15.
1999b. Bozukov, p. 50.
1934. *Populus* sp. aff. *P. tacamahaca* Mill.; Stefanov & Jordanov, p. 11, Pl. 2, Fig. 3.
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Oranovo-Simitli (Simitli Formation, Maeotian); Sofia basin – Novi Iskur (Novi Iskur Formation, Middle Pontian-Early Dacian).
Collection: IB (BAS).

***Populus canescens* (Aiton) Sm.**

1956. Kitanov & Nikolova, p. 91, Pl. 1, Fig. 3; Fig.-text 5.
Material: Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Populus germanica* (Menzel) H. Walther**

1978. Walther in Mai & Walther, p. 90, Pl. 36, Figs 1-8; Pl. 37, Figs 1-5.
1988. Černjavska & al., p. 30.
1926. *Menispermites germanica* Menzel, p. 32, Figs 1-3.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

***Populus* aff. *lasiocarpa* Oliv.**

1999b. Bozukov, p. 50, Pl. 1, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Populus latior A. Braun

1932. Konjarov, Pl. 16, Pl. 17, Fig. 2; Fig.-text 3.
1964a. Palamarev, p. 13.
1967. Petkova, p. 137, Pl. 3, Fig. 2; Pl. 11, Fig. 4.
Rev. 1987. *Populus populina* (Brongn.) Knobloch; Palamarev & Petkova, p. 96, Pl. 26, Figs 1-3.

***Populus mutabilis* Heer**

1856. Heer, p. 19, Pl. 60, Figs 4-17; Pl. 61; Pl. 62; Pl. 63, Figs 1-4.
1932. Konjarov, p. 54, Pl. 16, Fig. 2.
Material: Li.
Location and stratigraphical range: Pernik (Coal-bearing formation, Upper Oligocene).
Collection: Unkown.

***Populus nigra* L.**

1935. Stefanov & Jordanov, p. 31, Pl. 7, Fig. 4; Fig.-text 30.
1956. Kitanov & Nikolova, p. 89, Fig. 4.
Material: Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian) – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Populus pliobolleana* Kolak.**

1958. Kolakovsky, p. 359, Pl. 15, Figs 1-2.
1984. Kitanov, p. 64, Fig.-text 13.4.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Populus populina* (Brongn.) Knobloch**

1964. Knobloch, p. 601.
1987. Palamarev & Petkova, p. 96, Pl. 26, Figs 1-3.
1992. Bozukov & Palamarev, p. 13, Pl. 7, Figs 2-3; Pl. 8, Figs 1, 3.
1999b. Bozukov, p. 51.
1932. *P. latior* A. Braun; Konjarov, p. 54, Pl. 16, Pl. 17, Fig. 2; Fig.-text 3.
1964a. Palamarev, p. 13.
1967. Petkova, p. 137, Pl. 3, Fig. 2; Pl. 11, Fig. 4.
1822. *Phyllites populina* Brongn.; Brongniart, p. 237, Pl. 14, Fig. 4.
Material: Li.
Location and stratigraphical range: Pernik (Coal-bearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian); Belo Pole (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

***Populus* aff. *pruinosa* Schrenk**

1999b. Bozukov, p. 51, Pl. 2, Fig. 1.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Populus tremula* L.**

1929. Stojanoff & Stefanoff, p. 28, Fig. 4, 6; Pl. 4, Figs 5-6; Fig.-text 7.
1934. Stefanov & Jordanov, p. 11.
1935. Stefanov & Jordanov, p. 30, Pl. 7, Figs 1-3; Fig.-text 29.
1940. Kitanov, p. 7, Pl. 2, Fig. 2.
1956. Kitanov & Nikolova, p. 89, Pl. 1, Fig. 2; Fig.-text 3.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Populus zaddachii* Heer**

1860. Heer in Zaddach, p. 29, Pl. 4, Figs 1-2.
1859. Heer, p. 307 (nom. nudum).
1992. Bozukov & Palamarev, p. 12, Pl. 6, Fig. 1; Pl. 8, Fig. 2; Pl. 9, Figs 3-4.
1999b. Bozukov, p. 51,
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Populus sp. aff. *P. tacamahaca* Mill.

1934. Stefanov & Jordanov, p. 11, Pl. 2, Fig. 3.
Rev. *Populus balsamoides* Göpp.; Palamarev, hoc loco.

PORANA Burm. – CONVOLVULACEAE

Porana macrantha Heer

1964b. Palamarev, p. 135, Pl. 1, Fig. 6.

1967. Palamarev, p. 97.
1988. Černjavska & al., p. 31.
2000. Bozukov, p. 27, Pl. 4, Fig. 2.
Rev. *Chaneya oeningensis* (Unger) Teodoridis & Kvaček; Bozukov, hoc loco.

Porana oeningensis (Unger) Heer

1932. Konjarov, p. 54, Pl. 22, Fig. 5.
1998. Palamarev & al., p. 15.
Rev. *Chaneya oeningensis* (Unger) Teodoridis & Kvaček; Bozukov, hoc loco.

POTENTILLA L. – ROSACEAE

***Potentilla pliocenica* E. Reid**

1920. Reid, p. 127, Pl. 8, Figs 31-33.
1970. Palamarev, p. 46, Pl. 2, Fig. 4.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

PROSERPINACA L. – HALORRHAGACEAE

***Proserpinaca reticulata* C. & E. Reid**

1915. Reid & Reid, p. 123, Pl. 14, Figs 14-19.
1970. Palamarev, p. 50, Pl. 3, Figs 12-15.
1982. Palamarev, p. 18, Pl. 4, Figs 1-3.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

PROTEA L. – PROTEACEAE

***"Protea" lingulata* Heer**

1856. Heer, p. 95, Pl. 97, Figs 19-22.
1963b. Palamarev, p. 75, Pl. 2, Fig. 15.
1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The systematic affinity to genus *Protea* is questionable.

PRUNIPHYLLUM – ROSACEAE

***Pruniphyllum peregrum* (Unger) Weyland**

1967. Palamarev, p. 95.
1850b. *Amygdalus pereger* Unger, p. 54, Pl. 34, Figs 10-14.
1963b. Palamarev, p. 82, Pl. 3, Fig. 35.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

PRUNUS L. – ROSACEAE

***Prunus attenuatifolia* Palam. & Petkova** (Plate IV, Fig. 1).

1987. Palamarev & Petkova, p. 111, Pl. 30, Fig. 1.
Holotypus: Pl. 30, Fig. 1, (N R-3636a), Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Prunus langsdorfii* Kirchh.**

1957. Kirchheimer, p. 175, Fig.-text 86.
1963a. Palamarev, p. 211, Fig.-text 7.
1967. Palamarev, p. 94.
Material: Ca.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Prunus laurocerasus L.

1929. Stojanoff & Stefanoff, p. 75, Pl. 11, Fig. 7.
Rev. *Laurocerasus officinalis* M. Roem. foss.; Bozukov, hoc loco.

1932. Konjarov, Pl. 56, Fig. 6.
1935. Stefanov & Jordanov, p. 59, Pl. 20, Fig. 5; Fig.-text 57.
Rev. 1987. Species indet.; Palamarev & Petkova, p. 110.

***Prunus* cf. *scharfii* Gregor**

1978. Gregor, p. 37, Pl. 8, Figs 1-4; Fig.-text 8c.
1994b. Palamarev, p. 29, Pl. 5, Figs 3-4.
Material: Ca.
Location and stratigraphical range: Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Prunus* sp. aff. sect. *Prunifora* Fiori & Paol.**

1934. Stefanov & Jordanov, p. 24, Pl. 3, Fig. 12.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

PSEUDOEURYALE Dorof. – NYMPHAEACEAE

***Pseudoeuryale europaea* (C.A. Weber) Dorof.**

1972. Dorofeev, p. 1052.
1982. Palamarev, p. 10, Pl. 3, Fig. 3.
1970. *Euryale* ex gr. *europaea* E. Reid; Palamarev, p. 40, Pl. 2, Figs 2-3.
1907. *E. europaea* C.A. Weber; Weber, p. 150.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Nikolichevtsi (Nikolichevtsi, Maeotian).
Collection: IB (BAS).

PTELEA L. – RUTACEAE

***Ptelea* sp.**

1995. Palamarev & Staneva, p. 119.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

PTELEAECARPUM Weyland – RUTACEAE

***Pteleaecarpum europaeum* (Bronn) Bůžek & Knobloch**

1969. Bůžek & Knobloch in Knobloch, p. 123, Pl. 23, Figs 3, 3a; Pl. 64, Fig. 5.
1975. Palamarev & Petkova, p. 212, Pl. 4, Fig. 8.
1988. Palamarev & Kitanov, p. 135, Pl. 8, Fig. 6.
1999a. Palamarev & al., p. 38, Pl. 4, Fig. 9.
1838. *Ulmus europaea* Bronn, p. 89, Pl. 35, Fig. 12.
Material: Ca.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Pustrogor (Pustrogor Formation, Lower Oligocene); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

PTEROCARYA Kunth – JUGLANDACEAE

Pterocarya castaneifolia (Göpp.) Schltdl.

1964a. Palamarev, p. 15.
1967. Palamarev, p. 94.
Rev. 1987. *Pterocarya paradisiaca* (Unger) Iljinsk.; Palamarev & Petkova, p. 84, Pl. 23, Figs 1, 3, 6-8.

Pterocarya caucasica C.A. Mey.

1929. Stojanoff & Stefanoff, p. 34, Fig. 1; Pl. 5, Fig. 1; Fig.-text 8.
Rev. 1988. *Pterocarya paradisiaca* (Ung.) Iljinsk.; Palamarev & Kitanov, p. 194, Pl. 10, Fig. 2.

1956. Kitanov & Nikolova, p. 88, Pl. 1, Fig. 1; Fig.-text 2.
Rev. 1988. *Carya denticulata* Iljinsk.; Palamarev & Kitanov, p. 194.

***Pterocarya limburgensis* C. & E. Reid**

1915. Reid & Reid, p. 73, Pl. 4, Figs 15-21.
1997. Mai & Palamarev, p. 486, Pl. 1, Fig. 8; Pl. 2, Fig. 8.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

***Pterocarya paradisiaca* (Unger) Iljinsk.**

1962. Iljinskaja, p. 104.
1967. Palamarev, p. 94.
1987. Palamarev & Petkova, p. 84, Pl. 23, Figs 1, 3, 6-8.
1988. Palamarev & Kitanov, p. 194, Pl. 10, Fig. 2.
1929. *P. caucasica* C.A. Mey.; Stojanoff & Stefanoff, p. 34, Fig. 1; Pl. 5, Fig. 1; Fig.-text 8.
1935. Stefanov & Jordanov, p. 42, Pl. 15, Figs 3-4; Fig.-text 39.
1964a. *P. castaneifolia* (Göpp.) Schltdl.; Palamarev, p. 15.
1984. *P. pterocarpa* (Mich.) Kunth; Kitanov, p. 63, Fig.-text 13.3.
1964a. *Carya bilinica* (Unger) Ettingsh.; Palamarev, p. 15.
1849. *Prunus paradisiaca* Unger, p. 7, Pl. 14, Fig. 22.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Pelovo, Rouzhintsi, Tolovitsa (Krivodol Formation, Volhynian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Gurmen (Nevrokop Forma-

tion, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Pterocarya pterocarpa (Michx.) Kunth foss.

1984. Kitanov, p. 63, Fig.-text 13.3.
Rev. 1988. *Pterocarya paradisiaca* (Unger) Iljinsk.; Palamarev & Kitanov, p. 194, Pl. 10, Fig. 2.

PUNICA L. – PUNICACEAE

***Punica palaeogranatum* Kutuzkina**

1976. Kutuzkina, p. 258, Pl. 2, Figs 7-8; Fig.-text 7.
1988. Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

PYRACANTHA M. Roem. – ROSACEAE

***Pyracantha coccinea* M. Roem.**

1934. Stefanov & Jordanov, p. 22, Pl. 1, Fig. 3; Pl. 8, Fig. 11.
1935. Stefanov & Jordanov, p. 56, Fig.-text 53.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

PYRUS L. – ROSACEAE

***Pyrus* aff. *P. amygdaliformis* Vill.**

1934. Stefanov & Jordanov, p. 23, Pl. 2, Fig. 4; Pl. 7, Fig. 12.
1935. Stefanov & Jordanov, p. 58, Fig.-text 55.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Middle Pontian-Lower Dacian).
Collection: Unkown.

***Pyrus* aff. *P. communis* L.**

1934. Stefanov & Jordanov, p. 22, Pl. 1, Fig. 3; Pl. 7, Fig. 11.
1956. Kitanov & Nikolova, p. 105.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Pyrus theobroma* Unger**

1850b. Unger, p. 53, Pl. 37, Figs 1-7.
1963b. Palamarev, p. 82, Pl. 3, Fig. 34.
1967. Palamarev, p. 94.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

QUERCOPHYLLUM Fontaine – FAGACEAE

***Quercophyllum brezanii* Palam. & Rüffle**

1965. Palamarev & Rüffle in Rüffle & Palamarev, p. 149, Pl. 1; Pl. 2, Figs 1-2.
1967. Palamarev, p. 93.
Holotypus: Pl. 2, Figs 1-2, (N Pr-630), Rüffle & Palamarev (1965).
Material: Cu, Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

QUERCUS L. – FAGACEAE

Quercus aegilops L.

1929. Stojanoff & Stefanoff, p. 55, Pl. 10, Fig. 3; Fig.-text 15.3.
Rev. 1988. *Quercus trojana* Webb foss.; Palamarev & Kitanov, p. 130, Pl. 7, Figs 5-6, 9.

Quercus apocynophyllum Ettingsh.

1979. Rüffle & Palamarev, p. 31, Pl. 1, Figs 1-3; Pl. 2, Figs 1-3; Pl. 3, Figs 1-3; Pl. 4, Figs 1-3; Figs-text 1-8.
Rev. 1987. *Quercus lyellii* Heer; Palamarev & Petkova, p. 72, Pl. 20, Figs 4-5.

***Quercus bulgarica* Kitan. fil.** (Plate IV, Fig. 5).

1973. Kitanov, p. 529, Figs-text 1a-c; Figs-text 2a-f.
1929. *Q. cerris* L.; Stojanoff & Stefanoff, p. 52, Pl. 9, Fig. 9.

1935. *Q. drymeja* Unger; Stefanov & Jordanov, p. 40, Pl. 11, Figs 7-12.
Holotypus: Fig.-text 2a, (N G-3044), Kitanov (1973).
Material: Ca, Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Quercus cardanii A. Massal.

1859. Massalongo in Massalongo & Scarbelli, p. 179, Pl. 22-23, Fig. 10-14; Pl. 42, Fig. 13.
1988. Palamarev & Kitanov, p. 190, Pl. 10, Fig. 4; Pl. 11, Fig. 1; Pl. 12, Fig. 1.
1929. *Q. roburoides* Béranger; Stojanoff & Stefanoff, p. 63, Pl. 7, Figs 1-6; Pl. 8, Figs 1-4, 14; Figs-text 17-18.
1932. Konjarov, p. 166, Pl. 54, Figs 1-3; Pl. 55, Fig. 1
1934. Stefanov & Jordanov, p. 19.
1935. Stefanov & Jordanov, p. 41, Pl. 14, Figs 1-5; Pl. 15, Figs 1-2.
1929. *Quercus* sp. aff. *Q. hartwissiana* auct. non Steven; Stojanoff & Stefanoff, p. 64, Pl. 8, Fig. 5; Fig.-text 14.
1940. Kitanov, p. 11, Pl. 4, Figs 1a-c; Pl. 5, Figs 1a-b.
1956. Kitanov & Nikolova, p. 96, Pl. 2, Figs 5-6; Pl. 3, Figs 1-3; Figs-text 9-11.
1960. Kitanov, p. 371, Pl. 2, Figs 1-3; Pl. 3, Figs 1-3; Pl. 4, Fig. 1a.
1984. Kitanov; p. 60, Fig.-text 12.3.
1940. *Q. sessiliflora* foss. auct. non Salisb.; Kitanov, p. 11, Pl. 3, Fig. 1a.
1956. Kitanov & Nikolova, p. 98, Pl. 3, Fig. 4.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Quercus castaneifolia C.A. Mey. foss.

1962. Hadžiev & Palamarev, p. 5, Fig.-text 1a.
Rev. 1987. *Quercus pseudocastanea* Göpp.; Palamarev & Petkova, p. 69, Pl. 20, Fig. 6.

Quercus sp. aff. *Q. castaneifolia* C.A. Mey.

1934. Stefanov & Jordanov, p. 18.
Rev. 1987. *Quercus pseudocastanea* Göpp.; Palamarev & Petkova, p. 69, Pl. 20, Fig. 6.

Quercus cerris L.

1929. Stojanoff & Stefanoff, p. 52, pars, Figs 1-3, 5-7; Pl. 9, Figs 1-8 (non Fig. 9 = *Q. bulgarica* Kitan. fil.); Fig.-text 14.
1932. Konjarov, p. 166, Pl. 55, Figs 2-3.
1934. Stefanov & Jordanov, p. 29, Pl. 6, Fig. 11; Pl. 7, Figs 1-4.
1935. Stefanov & Jordanov, p. 40, Pl. 13, Figs 2-6.
1956. Kitanov & Nikolova, p. 95, Fig.-text 8.
1960. Kitanov, p. 10, Pl. 2, Figs 3a-c.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

Quercus coccifera L. foss.

1929. Stojanoff & Stefanoff, p. 67, Pl. 7, Figs 7-4; Pl. 8, Fig. 6; Fig.-text 16.
1932. Konjarov, p. 125, Pl. 32, Fig. 6; Pl. 5, Figs 5-7.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Oranovo-Simitli (Simitli Formation, Maeotian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Quercus coccifera L.

1934. Stefanov & Jordanov, p. 17, Pl. 6, Figs 3-7.
1935. Stefanov & Jordanov, p. 39, Pl. 10, Figs 7-8; Pl. 11, Figs 1-5.
1967. Palamarev, p. 93.
Rev. 1987. *Quercus mediterranea* Unger; Palamarev & Petkova, p. 70, Pl. 38, Figs 5а-н.

Quercus cruciata A. Braun

1850. Braun in Bruckmann, p. 228.
1975. Palamarev & Kitanov, p. 76, Pl. 1, Fig. 1; Fig.-text 1.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).
Note: According to Frankenhäuser & Wilde (1995) *Q. cruciata* belongs to a new morpho-genus *Pungiphyllum* and is excluded from the *Fagaceae*.

***Quercus deperdita* (Unger) Iljinsk.**

1962. Iljinskaja, p. 105.
1967. Palamarev, p. 93.
1852. *Myrica deperdita* Unger, p. 32, Pl. 16, Figs 3-5.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).
Note: The taxon has uncertain systematic position.

***Quercus diplodon* Saporta & Marion**

1878. Saporta & Marion, p. 38, Pl. 5, Figs 1-9; Pl. 6, Figs 1-6; Pl. 7, Fig. 1.
1988. Černjavska & al., p. 30.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

***Quercus drymeja* Unger**

1847. Unger, p. 113, Pl. 32, Figs 1-4.
1932. Konjarov, p. 125, Pl. 32, Figs 3-5.
1934. Stefanov & Jordanov, p. 18, Pl. 6, Figs 8-10.
1935. Stefanov & Jordanov, p. 40, pars Pl. 12, Fig. 4 (non Pl. 11, Fig. 6 = sp. indet., Figs 7-12 = *Q. bulgarica* Kitan. fil.; Pl. 12, Figs 1-3, 5; Pl. 13, Fig. 1 = sp. indet.).
1967. Palamarev, p. 93.
1998. Palamarev & al., p. 15.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian); Oranovo-Simitli (Simitli Formation, Maeotian).
Collection: IB (BAS).

Quercus drymeja Unger

1929. Stojanoff & Stefanoff, p. 51, Pl. 8, Figs 11-13; Figs 3-4; Fig.-text 13.
1940. Kitanov, p. 9, Pl. 1, Fig. 5a-c.
Rev. 1988. *Quercus kubinyi* (Kovats ex Ettingsh.) Czeczott; Palamarev & Kitanov, p. 189, Pl. 4, Fig. 8; Pl. 5, Figs 2, 4-9; Pl. 6, Figs 4-7.

***Quercus elaena* Unger**

1847. Unger, p. 112, Pl. 31, Fig. 4.
1964a. Palamarev, p. 16, Pl. 12, Fig. 2; Fig.-text 9.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: The taxon has uncertain systematic position.

Quercus furcinervis Rossm.

1932. Konjarov, p. 129, Pl. 42, Figs 1-4; Pl. 66, Figs 1-3.
Rev. 1998. *Eotrigonobalanus furcinervis* (Rossm.) H. Walther & Kvaček; Palamarev & Mai, p. 243.

***Quercus glaucifolia* Andr.**

1959a. Andreánszky, p. 103, Pl. 29, Fig. 3; Fig.-text 89.
1988. Palamarev & Kitanov, p. 188, Pl. 5, Fig. 3.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Quercus goeppertii* C.O. Weber**

1852. Weber, p. 156, Pl. 17, Figs 3-4.
1963b. Palamarev, p. 72, Pl. 1, Fig. 9.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Quercus hamadryadum* Unger**

1847. Unger, p. 110, Pl. 30, Fig. 8.
1987. Palamarev & Petkova, p. 70, Pl. 18, Fig. 2.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Quercus hartwissiana Steven foss.

1929. Stojanoff & Stefanoff, p. 64, Pl. 8, Fig. 5; Fig.-text 14.
1940. Kitanov, p. 11, Pl. 4, Figs 1a-c; Pl. 5, Figs 1a-b.
1956. Kitanov & Nikolova, p. 96, Pl. 2, Figs 5-6; Pl. 3, Figs 1-3; Figs-text 9-11.
1960. Kitanov, p. 371, Pl. 2, Figs 1-3; Pl. 3, Figs 1-3; Pl. 4, Fig. 1a.
1984. Kitanov; p. 60, Fig.-text 12.3.

Rev. 1988. *Quercus cardanii* A. Massal.; Palamarev & Kitanov, p. 190, Pl. 10, Fig. 4; Pl. 11, Fig. 1; Pl. 12, Fig. 1.

Quercus ilex L.

1929. Stojanoff & Stefanoff, p. 59, Pl. 6, Figs 7-9; Fig.-text 15.5.
1932. Konjarov, p. 166, Pl. 56, Fig. 1.
1934. Stefanov & Jordanov, p. 17, Pl. 6, Figs 1-2.
1935. Stefanov & Jordanov, p. 39, Pl. 10, Figs 3-6.
Rev. 1987. *Quercus mediterranea* Unger; Palamarev & Petkova, p. 70, Pl. 18, Figs 5a-b.

***Quercus ilex* L. foss.**

1984. Kitanov, p. 60, Fig.-text 12.1.
1999a. Bozukov, p. 5, Pl. 1, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

***Quercus indjatschaensis* Kassumova**

1966. Kassumova, p. 33, Pl. 7, Figs 1-2.
1999b. Palamarev & al., p. 14, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Quercus kubinyi* (Kováts ex Ettingsh.) Czeczott**

1951. Czeczott, p. 372, Fig. 7.
1988. Palamarev & Kitanov; p. 189, Pl. 4, Fig. 8; Pl. 5, Figs 2, 4-9; Pl. 6, Figs 4-7.
1929. *Q. drymeja* auct. non Unger; Stojanoff & Stefanoff, p. 51, Pl. 8, Figs 11-13; Figs-text 13.3-4.
1940. Kitanov, p. 9, Pl. 1, Figs 5a-c.
1852. *Castanea kubinyi* Ettingsh.; Ettingshausen, p. 6.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Quercus lyellii* Heer**

1862. Heer, p. 40, Pl. 12, Figs 2-9; Pl. 13, Figs 1-4; Pl. 14, Fig. 12b; Pl. 15, Figs 1-2; Pl. 17, Figs 4-5.
1987. Palamarev & Petkova, p. 72, Pl. 20, Figs 4-5.
1998. Palamarev & Mai, p. 250, Pl. 10, Fig. 12.
1999a. Bozukov, p. 4, Pl. 4, Fig. 5.
1999. Palamarev & al., p. 14, Pl. 6, Figs 1-2.
2001. Palamarev & al., p. 286.
1961. *Q. neriifolia* auct Palam., non A. Braun; Palamarev, p. 181, Fig.-text 10.
1979. *Q. apocynophyllum* Ettingsh.; Rüffle & Palamarev, p. 31, Pl. 1, Figs 1-3; Pl. 2, Figs 1-3; Pl. 3, Figs 1-3; Pl. 4, Figs 1-3; Figs-text 1-8.
1964. *Ficus* sp.; Palamarev, p. 18, Fig. 14, rev. & det. Palamarev & Petkova (1987).
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Borovets (Coalbearing formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi, Telish (Krivodol Formation, Volhynian); Koshava (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Quercus macedonica DC.

1929. Stojanoff & Stefanoff, p. 55, Fig.-text 15.4.
Rev. 1988. *Quercus trojana* Webb foss.; Palamarev & Kitanov, p. 130, Pl. 7, Figs 5-6, 9.

***Quercus mediterranea* Unger**

1847. Unger, p. 114, Pl. 32, Figs 5-9.
1967. Palamarev, p. 93.
1987. Palamarev & Petkova, p. 70, Pl. 8, Figs 5a-b.
1995. Palamarev & Staneva, p. 118.
1998. Palamarev & Mai, p. 251, Pl. 10, Fig. 15.
1929. *Q. ilex* L.; Stojanoff & Stefanoff, p. 59, Pl. 6, Figs 7-9; Fig.-text 15.5.
1932. Konjarov, p. 166, Pl. 56, Fig. 1.
1934. Stefanov & Jordanov, p. 17, Pl. 6; Figs 3-7.
1935. Stefanov & Jordanov, p. 39, Pl. 10, Figs 3-6.
1934. *Q. coccifera* L.; Stefanov & Jordanov, p. 17, Pl. 6, Figs 3-7.
1935. Stefanov & Jordanov, p. 39, Pl. 10, Figs 7-8; Pl. 11, Figs 1-5.
1962. *Myrica deperdita* Unger; Hadžiev & Palamarev, p. 8, Fig.-text 1.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Montana, Rouzhintsi, Stoudeno

Bouche (Krivodol Formation, Volhynian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Quercus neriifolia A. Braun

1850. Braun in Bruckmann, p. 229.
1962. Hadžiev & Palamarev, p. 7.
1963b. Palamarev, p. 93.
1964a. Palamarev, p. 16.
1966. Petkova & Kitanov, p. 8, Pl. 1, Fig. 10; Pl. 2, Fig. 2; Pl. 6, Fig. 3, 6.
1967. Petkova, p. 142, Pl. 3, Fig. 6.
1975. Palamarev & Petkova, p. 207.
1984. Kitanov, p. 63, Fig. 12.5.
1987. Palamarev & Petkova, p. 71, Pl. 20, Figs 2-3, 7.
1995. Palamarev & Staneva, p. 118.
1998. Palamarev & Mai, p. 252, Pl. 10, Fig. 9.
1998. Palamarev & al., Pl. 15.
1999a. Bozukov, p. 5, Pl. 3, Fig. 3.
1999a. Palamarev & al., p. 33, Pl. 2, Fig. 5.
1999b. Palamarev & al., p. 14, Pl. 9, Fig. 1.
1845. *Salix neriifolia* A. Braun, p. 170 (nomen).
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Gorno Voivodino (Haskovo limnestone formation, Upper Eocene – Lower Oligocene); Smolyan (Smoyan Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Borovets (Coalbearing formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Levka (Sandy argillaceous formation, Lower Oligocene); Pustrogor (Pustrogor Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Montana, Rouzhintsi, Shishmanovo, Stavertsi, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian); Belo Pole (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Quercus neriifolia A. Braun

1961. Palamarev, p. 181, Fig.-text 10.
Rev. 1987. *Quercus lyellii* Heer; Palamarev & Petkova, p. 72, Pl. 20, Figs 4-5.

Quercus nimrodis Unger

1850b. Unger, p. 33, Pl. 31, Figs 1-3.
1999a. Bozukov, p. 5, Pl. 3, Fig. 5
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Quercus palaeodrys Saporta & Marion

1878. Saporta & Marion, p. 45, Pl. 3, Fig. 9.
1967. Palamarev, p. 93.
1998. Palamarev & Mai, p. 253.
1966. *Quercus* cf. *palaeodrys* Saporta & Marion; Palamarev & Petkova, p. 57, Fig.-text 5.
Material: Li.
Location and stratigraphical range: Belitsa (Sandstone and sandy argillaceous schist formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Quercus aff. *pinnativenulosa* Müll.

1999a. Bozukov, p. 6, Pl. 2, Fig. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Quercus pontica C. Koch foss.

1984. Kitanov, p. 62, Fig.-text 13.1.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Quercus pontica-miocaenica Kubát

1955. Kubát in Kubát & Bubik, p. 175, Pl. 10, Fig. 9; Pl. 11, Fig. 4; Pl. 13, Fig. 5.
1987. Palamarev & Petkova, p. 68, Pl. 20, Figs 1a-b.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).
Note: According to Walther & Zastawniak (1991), *Q. pontica-miocaenica* belongs to *Q. gigas* Göpp.

Quercus pseudocastanea Göpp.

1852. Göppert, p. 274, Pl. 25, Figs 1-2.

1987. Palamarev & Petkova, p. 69, Pl. 20, Fig. 6.
1934. *Quercus* sp. aff. *Q. castaneifolia* C.A. Mey.; Stefanov & Jordanov, p. 18.
1962. *Q. castaneifolia* C.A. Mey. foss.; Hadžiev & Palamarev, p. 5, Fig.-text 1a.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian); Kladoroub-Ostrokaptsi, Montana, Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Quercus roburoides Béranger

1932. Konjarov, p. 166, Pl. 54, Figs 1-3; Pl. 55, Fig. 1
1934. Stefanov & Jordanov, p. 19.
1935. Stefanov & Jordanov, p. 41, Pl. 14, Figs 1-5; Pl. 15, Figs 1-2.
Rev. 1988. *Quercus cardanii* A. Massal.; Palamarev & Kitanov, p. 190, Pl. 10, Fig. 4; Pl. 11, Fig. 1; Pl. 12, Fig. 1.

Quercus sessiliflora foss. auct. non Salisb.

1940. Kitanov, p. 11, Pl. 3, Fig. 1a.
1956. Kitanov & Nikolova, p. 96, Pl. 2, Figs 5-6; Pl. 3, Figs 1-3; Figs-text 9-11.
Rev. 1988. *Quercus cardanii* A. Massal.; Palamarev & Kitanov, p. 190, Pl. 10, Fig. 4; Pl. 11, Fig. 1; Pl. 12, Fig. 1.

***Quercus sosnowskyi* Kolak.**

1955. Kolakovsky, p. 447, Pl. 8, Fig. 4.
1984. Kitanov, p. 60, Fig.-text 12.4.
1999a. Bozukov, p. 6, Pl. 2, Figs 1-2.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Quercus trojana* Webb foss.**

1988. Palamarev & Kitanov, p. 130, Pl. 7, Figs 5-6, 9.
1929. *Q. macedonica* DC.; Stojanoff & Stefanoff, p. 55, Fig.-text 15.4.
1929. *Quercus* aff. *Q. aegilops* L.; Stojanoff & Stefanoff, p. 55, Pl. 10, Fig. 3; Fig.-text 15.3.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Quercus valdensis* Heer**

1856. Heer, p. 46, Pl. 78, Fig. 15.
1964a. Palamarev, p. 16, Pl. 3, Fig. 4; Fig.-text 10.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing Formation, Middle Miocene).
Collection: IB (BAS).
Note: The taxon has uncertain systematic position.

Quercus venosa (Rossm.) Knobloch

1975. Palamarev & Petkova, p. 211, Pl. 4, Fig. 9.
Rev. 1998. *Castaneophyllum venosum* (Rossm.) Knobloch & Kvaček; Palamarev & Mai, p. 239.

RANUNCULUS L. – RANUNCULACEAE

***Ranunculus aquaticus* L. foss.**

1965. Palamarev, p. 141, Pl. 2, Fig. 23.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Ranunculus* aff. *arvensis* L.**

1994. Palamarev, p. 137, Pl. 3, Fig. 13.
Material: Ca.
Location and stratigraphical range: Sofia basin – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Ranunculus sceleratoides* P. Nikitin ex Dorof.**

1951. Dorofeev, p. 35, Fig.-text 1.19.
1948. Nikitin, p. 1104 (nom. nudum).
1987. Palamarev & Petkova, p. 48, Pl. 14, Fig. 1.
1994a. Palamarev, p. 137, Pl. 1, Fig. 15.
Material: Ca.
Location and stratigraphical range: Drenovets, Gabrovnitsa (Krivodol Formation, Volhynian); Slavotin (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

RHAMNUS L. – RHAMNACEAE

***Rhamnus eridanii* Unger**

1850b. Unger, p. 48, Pl. 31, Figs 3-6.
1964a. Palamarev, p. 28, Fig.-text 37.
Material: Li.

Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Rhamnus gaudinii Heer

1932. Konjarov, p. 98, pars Pl. 29, Figs 4-5; p. 173, Pl. 59, Fig. 3 (non Pl. 23, Fig. 6; Pl. 29, Fig. 3 = sp. indet.)
1961. Palamarev, p. 186, Pl. 7, Fig. 3.
1964a. Palamarev, p. 28.
1967. Palamarev, p. 96.
Rev. 1987. *Alnus gaudinii* (Heer) Knobloch & Kvaček; Palamarev & Petkova, p. 74, Pl. 21, Fig. 2.

***Rhamnus media* Iljinsk.**

1959. Iljinskaja, p. 613, Pl. 1, Fig. 3; Pl. 2, Figs 4-4a; Pl. 3, Figs 1-1a.
1987. Palamarev & Petkova, p. 134, Pl. 33, Fig. 1; Pl. 34, Fig. 7.
Material: Li.
Location and stratigraphical range: Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Rhamnus rectinervis* Heer**

1859. Heer, p. 80, Pl. 125, Figs 2-6.
1987. Palamarev & Petkova, p. 134, Pl. 34, Fig. 6.
2000. Bozukov, p. 25, Pl. 3, Fig. 2
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Karbintsi (Krivodol Formation, Bessarabian; Pelovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Rhamnus rossmaessleri* Unger**

1850a. Unger, p. 464.
1964a. Palamarev, p. 26, Fig.-text 36.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Rhamnus warthae* Heer**

1872. Heer, p. 20, Pl. 5, Figs 2-3; Pl. 6, Figs 3-5.
1987. Palamarev & Petkova, p. 135, Pl. 34, Fig. 8.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Rhamnus* sp.**

1929. Stojanoff & Stefanoff, p. 83, Pl. 12, Fig. 3.
1934. Stefanov & Jordanov, p. 28, Pl. 1, Fig. 8.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

RHODODENDRON L. – ERICACEAE

***Rhododendron myrtifolium* Schott, Nyman & Kotschy**

1929. Stojanov & Stefanff, p. 85, Figs 1-2; Pl. 2, Figs 7-8; Fig.-text 22.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Rhododendron ponticum* L. foss.**

1929. Stojanoff & Stefanoff, p. 84, Pl. 12, Fig. 6.
1934. Stefanov & Jodranov, p. 29, Pl. 8, Fig. 5.
1935. Stefanov & Jodranov, p. 69, Pl. 23, Fig. 3; Fig.-text 69.
1966. Petkova & Kitanov, p. 18, Pl. 5, Figs 2-3; Pl. 8, Fig. 4.
1987. Palamarev & Petkova, p. 98, Pl. 26, Fig. 5.
Material: Li.
Location and stratigraphical range: Rouzhintsi, Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Rhododendron* sp. aff. *R. catawbiense* Michx.**

1934. Stefanov & Jordanov, p. 29, Pl. 1, Fig. 9; Pl. 8, Figs 6-7.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

RHODOMYRTOPHYLLUM Rüffle & Jähnichen – MYRTACEAE

***Rhodomyrtophyllum reticulosum* (Rossm.) Knobloch & Kvaček**

1996. Knobloch & Kvaček in Knobloch & al., p. 102,

Pl. 34, Fig. 6; Pl. 35, Fig. 1; Pl. 37, Fig. 1; Pl. 39, Figs 1-5; Pl. 40, Figs 1-10; Figs-text 46d-e; Figs-text 47d-e; Figs-text 48a-f; Figs-text 49a-d; Fig.-text 50.
1999b. Palamarev & al., p. 19, Pl. 6, Fig. 8.
1840. *Phyllites reticulosa* Rossm.; Rossmässler, p. 32, Pl. 6, Fig. 24.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

***Rhodomyrtophyllum sinuatum* (Bandulska) H. Walther**

1985. Walther in Mai & Walther, p. 102, Pl. 26-28, Figs 5-7.
1988. Černjavska & al., p. 31.
1994. Palamarev & Petkova, p. 36, Pl. 1, Fig. 1, 4; Pl. 3, Figs 1-3.
1995. Palamarev & Staneva, p. 119, Pl. 1, Fig. 5.
1931. *Rhodomyrtus sinuata* Bandulska, p. 657, Pl. 39, Figs 1-2, 4-5, 8; Figs-text 8-11.
Material: Li.
Location and stratigraphical range: Goudevitsa (Goudevitsa Formation, Lower Eocene); Hvoina, Orehovo (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Gorno Voivodino (Haskovo limnestone formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

RHUS L. – ANACARDIACEAE

***Rhus blitum* Saporta**

1862. Saporta, p. 249, Pl. 13, Fig. 4.
1964b. Palamarev, p. 133, Pl. 8, Fig. 1.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Rhus cassiaeformis* Ettingsh.**

1853. Ettingshausen, p. 81, Pl. 26, Figs 30-32.
1963b. Palamarev, p. 77, Pl. 2, Fig. 20.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Rhus coriaria L.

1929. Stojanoff & Stefanoff, p. 80, Pl. 9, Fig. 10; Fig.-text 21.2.
Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

Rhus juglandogene Ettingsh.

1963a. Palamarev, p. 211, Fig. 8.
1967. Palamarev, p. 95.
Rev. 1987. *Engelhardia orsbergensis* (P. Wessel & C.O. Weber) Jähnichen, Mai & H. Walther; Palamarev & Petkova, p. 88, Pl. 24, Figs 1-3, 8.

1932. Konjarov, p. 98, Pl. 30, Fig. 4.
1961. Palamarev, p. 185, Pl. 8, Fig. 4; Fig.-text 19.
1964a. Palamarev, p. 25.
1967. Petkova, p. 147, Pl. 7, Figs 1-2; Pl. 13, Fig. 1.
Rev. 1987. *Rubus merianii* (Heer) Kolak.; Palamarev & Petkova, p. 108, Pl. 28, Fig. 2.

***Rhus noeggerathii* C.O. Weber**

1852. Weber, p. 212, Pl. 23, Fig. 14.
1999b. Bozukov, p. 55, Pl. 4, Fig. 2; Pl. 5, Fig. 3.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

***Rhus prisca* Ettingsh.**

1853. Ettingshausen, p. 79, Pl. 26, Figs 13-23.
1932. Konjarov, p. 129, Pl. 41, Figs 5-6.
1967. Palamarev, p. 95.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Rhus pteleaefolia C.O. Weber

1967. Petkova, p. 147, Pl. 7, Fig. 3; Pl. 13, Fig. 1.
Rev. 1987. *Ilex falsanii* Saporta & Marion; Palamarev & Petkova, p. 129, Pl. 32, Fig. 4.

Rhus quercifolia Göpp.

1932. Konjarov, p. 125, Pl. 37, Figs 1-2.
Rev. 1992. *Acer aegopodifolium* (Göpp.) Baikovskaja; Palamarev & Bozukov, p. 62.

RIBES L. – GROSSULARIACEAE

***Ribes grossularia* L.**

1929. Stojanoff & Stefanoff, p. 71.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

ROBINIA L. – FABACEAE

***Robinia pseudoacacia* L.**

1929. Stojanoff & Stefanoff, p. 78.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Middle Pntian-Lower Dacian).
Collection: Unkown.

***Robinia regelii* Heer**

1859. Heer, p. 99, Pl. 132, Figs 20-26, 34 (non Figs 35-41 = *Robinia* sp. fruct.).
1987. Palamarev & Petkova, p. 113, Pl. 30, Fig. 7.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian); Medovnitsa (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

ROSA L. – ROSACEAE

***Rosa* aff. *dumetorum* Thuill.**

1929. Stojanoff & Stefanoff, p. 74, Pl. 11, Fig. 6.
1934. Stefanov & Jordanov, p. 24, Pl. 1, Fig. 4.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Rosa* aff. *galica* L.**

1929. Stojanoff & Stefanoff, p. 74.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Rosa lignitarum Heer

1988. Černjavska & al., p. 31.
Rev. *Rosa lignitum* Engelh.; Palamarev, hoc loco.

***Rosa lignitum* Engelh.**

1876. Engelhard, p. 369, Pl. 19, Figs 11-12.
1988. *R. lignitarum* Heer; Černjavska & al., p. 31.
Material: Li.
Location and stratigraphical range: Hvoina basin (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene).
Collection: IB (BAS).

RUBUS L. – ROSACEAE

***Rubus laticostatus* Kirchh.**

1942. Kirchheimer, p. 438, Fig. 14.
1970. Palamarev, p. 47, Pl. 3, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Rubus merianii* (Heer) Kolak.**

1964. Kolakovsky, p. 131.
1937. Konstantinov, sp. indet., Pl. 5, Figs 6-10, det. Palamarev & Petkova 1987, p. 108.
1987. Palamarev & Petkova, p. 108, Pl. 28, Fig. 2.
1998. Palamarev & al., p. 14.
1859. *Rhus merianii* Heer, p. 82, Pl. 126, Figs 5-11.
1932. Konjarov, p. 98, Pl. 30, Fig. 4.
1961. Palamarev, p. 185, Pl. 8, Fig. 4; Fig.-text 19.
1964a. Palamarev, p. 25.
1967. Petkova, p. 147, Pl. 7, Figs 1-2; Pl. 13, Fig. 1.
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocenne); Choukourovo (Coalbearing formation, Middle Miocene); Pelovo, Slavyanovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Rubus microspermus* C. & E. Reid**

1910. Reid & Reid, p. 169, Pl. 15, Figs 13-17.
1970. Palamarev, p. 47, Pl. 2, Figs 15-16.
1971. Palamarev, p. 154.

1982. Palamarev, p. 18, Pl. 5, Figs 11-12.
1989. Palamarev, p. 52, Pl. 5, Figs 7.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Choukourovo (Coalbearing formation, Middle Miocene); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

Rubus mucronatus Palam.

1987. Palamarev in Palamarev & Petkova, p. 109, Pl. 29, Figs 2, 6.
Material: Ca.
Location and stratigraphical range: Drenovets (Krivodol Formation, Volhynian-Bessarabian); Gabrovnitsa, Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

RUMEX L. – POLYGONACEAE

Rumex acetosa L. foss.

1965. Palamarev, p. 141, Pl. 2, Figs 24-25; Pl. 4, Figs 37-38.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

Rumex sp. aff. *R. crispus* L.

1929. Stojanoff & Stefanoff, p. 69, Pl. 11, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

RUTA L. – RUTACEAE

Ruta pusila Menzel

1913. Menzel, p. 38, Pl. 4, Fig. 14.
1999b. Bozukov, p. 56, Pl. 7, Fig. 2.
Material: Blossom impression.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

RUTASPERMUM Chandler – RUTACEAE

Rutaspermum ornatum (Chandler) Chandler

1961. Chandler, p. 126, Pl. 26, Fig. 68; Pl. 27, Figs 1-7.
1997. Mai & Palamarev, p. 490, Pl. 4, Figs 9-12.
1925. *Zanthoxyllum ornatum* Chandler, p. 28, Pl. 4, Figs 4a-b.
Material: Ca.
Location and stratigraphical range: Dobarsko (Dobrinishte Formation, Upper Eocene).
Collection: IB (BAS).

SALIX L. – SALICACEAE

Salix alba L.

1934. Stefanov & Jordanov, p. 12, Pl. 3, Fig. 7; Pl. 5, Fig. 3.
1935. Stefanov & Jordanov, p. 32, Fig.-text 31; Pl. 7, Fig. 58.
1982. Kitanov, p. 37.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Zemlyane (Lozenets Formation, Romanian).
Collection: IB (BAS).

Salix angusta A. Braun

1851. Braun in Stizenberger, p. 77.
1932. Konjarov, p. 222, Pl. 64, Figs 5-6.
1964a. Palamarev, p. 13.
1967. Palamarev, p. 94.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Choukourovo (Coalbearing Formation, Middle Miocene); Maritsa basin – Merichleri (Lower Maritsa coalbearing formation, Maeotian-Dacian).
Collection: IB (BAS).

Salix caprea L.

1929. Stojanoff & Stefanoff, p. 33, Pl. 4, Fig. 10; Fig.-text 7.5.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Salix cinerea* L.**

1929. Stojanoff & Stefanoff, p. 32, Pl. 4, Fig. 12.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Salix* aff. *fragilis* L.**

1929. Stojanoff & Stefanoff, Pl. 4, Fig. 9.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Salix* sp. aff. *S. glabra* Scop.**

1935. Stefanov & Jordanov, p. 33, Pl. 7, Figs 9-10; Fig.-text 32.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Salix lavateri* A. Braun emend. Heer**

1851. Braun in Stizenberger, p. 78.
1856. Heer, p. 28, Pl. 66, Figs 1-12.
1987. Palamarev & Petkova, p. 95, Pl. 25, Fig. 8.
1856. *S. denticulata* Heer, p. 30, Pl. 68, Figs 1-4.
1932. *Salix* aff. *varians* Göpp.; Konjarov, p. 98, Pl. 26, Fig. 2.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Cherno Pole (Krivodol Formation, Bessarabian); Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Salix longa* A. Braun emend. Heer**

1851. Braun in Stizenberger, p. 78.
1856. Heer, p. 31, Pl. 69, Figs 12-14.
1932. Konjarov, p. 54, Pl. 15, Fig. 3; p. 129, Pl. 38, Fig. 8.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Lower Oligocene); Pernik (Coalbearing formation, Lower Oligocene).
Collection: Unkown.

***Salix media* Heer**

1856. Heer, p. 32, Pl. 68, Figs 14-19.
1964a. Palamarev, p. 13, Fig.-text 4.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Salix* aff. *nigricans* Sm.**

1929. Stojanoff & Stefanoff, p. 34.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Salix oblonga A. Braun

1932. Konjarov, p. 54, Pl. 15, Fig. 4.
Rev. *Salix tenera* A. Braun; Palamarev, hoc loco.

***Salix purpurea* L.**

1956. Kitanov & Nikolova, p. 92.
Material: Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

***Salix* aff. *silesiaca* Willd.**

1929. Stojanoff & Stefanoff, p. 33, Pl. 4, Fig. 11.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***Salix tenera* A. Braun**

1851. Braun in Stizenberger, p. 79.
1932. *S. oblonga* A. Braun; Konjarov, p. 54, Pl. 15, Fig. 4.
Material: Li.
Location and stratigraphical range: Pernik (Coalbearing formation, Lower Oligocene).
Collection: IB (BAS).

***Salix* aff. *triandra* L.**

1929. Stojanoff & Stefanoff, p. 30.
Material: Li.

Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Salix varians Göpp.

1855. Göppert, p. 26, Pl. 19, Figs 17-18; Pl. 20, Figs 1-2.
1937. Konstantinov, p. 260, Pl. 2, Fig. 8.
1964a. Palamarev, p. 13, Pl. 3, Fig. 3.
Material: Li.
Location and stratigraphical range: Tsareva Polyana (Continental formation, Lower Eocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Salix aff. *varians* Göpp.

1932. Konjarov, p. 98, Pl. 26, Fig. 2.
Rev. 1998. *Salix lavateri* A. Braun; Palamarev & al., p. 14.

Salix varians Göpp.

1932. Konjarov, p. 228, Pl. 69, Fig. 3.
Rev. 1994. *Thevetia sophiae* (C.O. Weber) Palam. & Petkova; Palamarev & Petkova, p. 41, Pl. 1, Fig. 5; Pl. 2, Figs 1-2, 4.

SAMBUCUS L. – SAMBUCACEAE

Sambucus parvula Chandler

1962. Chandler, p. 144, Pl. 23, Figs 1-10.
1973. Palamarev, p. 91, Pl. 4, Figs 7-9.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

Sambucus pulchella C. & E. Reid

1915. Reid & Reid, p. 135, Pl. 17, Figs 7-10.
1970. Palamarev, p. 53, Pl. 4, Figs 8-10.
1982. Palamarev, p. 23, Pl. 7, Figs 7-10.
1994a. Palamarev, p. 145, Pl. 3, Fig. 2.
1994b. Palamarev, p. 31, Pl. 4, Figs 7-8.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Sosia basin – Balsha (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Kutina (Gnilyane Formation, Lower Pontian); Ognyanovo (Baldevo Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

Sambucus pussila Dorof.

1977. Dorofeev, p. 82, Pl. 20, Figs 1-6.
1994a. Palamarev, p. 145, Pl. 4, Fig. 4.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

SAPINDUS Tourn. ex L. – SAPINDACEAE

Sapindus cupanioides Ettingsh.

1869. Ettingshausen, p. 15, Pl. 47.3.
1975. Palamarev & Kitanov, p. 79, Pl. 1, Fig. 3.
1964b. *Cupania* cf. *angustifolia* Andr. & Novak; Palamarev, p. 134, Pl. 9, Fig. 1.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

Sapindus falcifolius (A. Braun) A. Braun

1851. Braun in Stizenberger, p. 87.
1961. Palamarev, p. 186, Pl. 6, Figs 4-5; Fig.-text 20.
1962. Kitanov & Palamarev, p. 11, Pl. 4, Fig. 3; Fig.-text 6.
1962. Hadžiev & Palamarev, p. 11.
1964a. Palamarev, p. 27, Pl. 11, Fig. 1.
1967. Palamarev, p. 96.
1975. Palamarev & Petkova, p. 207.
1987. Palamarev & Petkova, p. 122, Pl. 31, Fig. 8.
1998. Palamarev & al., p. 15.
1999a. Palamarev & al., p. 37.
1999b. Bozukov, p. 59, Pl. 6, Fig. 2.
1836. *Juglans falcifolius* A. Braun in Buckland, p. 513.
Material: Li.
Location and stratigraphical range: Braikovitsa (Braikovitsa (Luka Formation, Upper Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Bobovdol

(Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi, Stoudeno Bouche (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Sapindus ungeri* Ettingsh.**

1870. Ettingshausen, p. 61, Pl. 10, Figs 1-2.
1961. Palamarev, p. 186, Fig.-text 21.
1964a. Palamarev, p. 27, Fig.-text 35.
1995. Palamarev & Staneva, p. 119, Pl. 3, Fig. 2.
1999a. Palamarev & al., p. 37, Pl. 4, Fig. 11.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

SAPIUM P. Braun – EUPHORBIACEAE

***Sapium germanicum* Kirchh.**

1941. Kirchheimer, p. 207, Fig.-text 8.
1989. Palamarev, p. 51, Pl. 4, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

SAPOTACITES Ettingsh. – SAPOTACEAE

***Sapotacites daphnes* (Unger) Ettingsh.**

1868a. Ettingshausen, p. 229, Pl. 38, Figs 8, 23.
1964b. Palamarev, p. 134, Pl. 9, Fig. 3.
1967. Palamarev, p. 94.
1847. *Quercus daphnes* Unger, Pl. 31, Figs 2-3.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

SASSAFRAS T. Nees – LAURACEAE

***Sassafras ferretianum* A. Massal.**

1859. Massalongo in Massalongo & Scarabelli, p. 268, Pl. 12, Figs 1-3.
1929. Stojanoff & Stefanoff, p. 70, Pl. 11, Figs 3-4.
1956. Kitanov & Nikolova, p. 100, Pl. 5, Fig. 1; Fig.-text 15.
1966. Petkova & Kitanov, p. 14, Pl. 4, Fig. 3.
1984. Kitanov, p. 52, Fig. 7.3.
1987. Palamarev & Petkova, p. 39, Pl. 13, Figs 1-2.
1995. Palamarev & Staneva, p. 117, Pl. 2, Fig. 6.
1934. *Sassafras* sp. aff. *S. officinale* T. Nees & Eberm.; Stefanov & Jordanov, p. 21, Pl. 1, Fig. 2.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Kladoroub-Ostrokaptsi, Rouzhintsi, Shishmanovo, Tolovitsa (Krivodol Formation, Volhynian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Sassafras sp. aff. *S. officinale* T. Nees & Eberm.

1934. Stefanov & Jordanov, p. 21, Pl. 1, Fig. 2.
Rev. *Sassafras ferretianum* A. Massal.; Palamarev, hoc loco.

***Sassafras ucrainicum* (Krysht.) Imkhan.**

1974. Imkhanitskaya, p. 36, Pl. 16, Figs 1-2.
1998a. Bozukov, p. 8, Pl. 1, Fig. 4.
1999a. Palamarev & al., p. 32, Pl. 1, Fig. 14.
1911. *Oreodaphne ucrainica* Krysht.; Kryshtofovich, p. 32, Pl. 6, Fig. 4.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

SCHEFFLERA J.R. Forst. & G. Forst. – ARALIACEAE

***Schefflera chandlerae* Palam.**

1987. Palamarev in Palamarev & Petkova, p. 129, Pl. 34, Figs 1, 3, 9.
1988. Palamarev, p. 97, Pl. 1, Figs 1-6; Pl. 2, Figs 6, 9-10.
Holotypus: Pl. 1, Fig. 1, Palamarev (1988).
Material: Ca.
Location and stratigraphical range: Drenovets, Gabare (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

SCHINUS L. – ANACARDIACEAE

***"Schinus" oligocaenicus* Andr. & Novak**

1957. Andreánszky & Novak, p. 49, Pl. 2, Figs 6-7; Pl. 3, Fig. 9.
1962b. Palamarev, p. 19, Fig.-text 2d.
Material: Li.
Location and stratigraphical range: Borovets (Coal-bearing formation, Lower Oligocene).
Collection: IB (BAS).
Note: Its belonging to genus *Schinus* is uncertain.

SIDEROXYLON L. – SAPOTACEAE

***Sideroxylon salicites* (C.O. Weber) Weyland**

1937. Weyland, p. 112, Pl. 14, Figs 1-8.
1967. Palamarev, p. 94.
1998. Palamarev & al., pp. 15, 19.
1856. *Lobatia salicites* C.O. Weber in Wessel & Weber, p. 154, Pl. 28, Figs 1-3.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene);
Collection: IB (BAS).

SILENE L. – CARYOPHYLLACEAE

Silene aff. *asterias* Griseb.

1968. Palamarev, p. 203, Pl. 40, Figs 10-12; Figs-text 4-4a.
Rev. 1987. *Lychnis slavotinica* Palam.; Palamarev & Petkova, p. 91, Pl. 24, Fig. 9.

SKIMMIA Thunb. – RUTACEAE

***Skimmia tortonica* Palam. & Uzunova**

1970. Palamarev & Uzunova, p. 835, Figs-text 1-4.
1995b. Uzunova, p. 8, Pl. 5, Figs 1-4.
Holotypus: Fig-text 1, 3, Palamarev & Uzunova (1970).
Material: Cu, Li.
Location and stratigraphical range: Milchina Luka, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

SOPHORA L. – FABACEAE

***Sophora europaea* Unger**

1850b. Unger, p. 57, Pl. 43, Figs 1-5.
1967. Palamarev, p. 95.
1987. Palamarev & Petkova, p. 112, Pl. 30, Fig. 8.
1995. Palamarev & Staneva, 119.
1999a. Palamarev & al., p. 36, Pl. 4, Fig. 3.
1999b. Bozukov, p. 55, Pl. 7, Fig. 3.
1967. *Podogonium knorii* Heer; Petkova, p. 145, pars Pl. 6, Fig. 6 (non Fig. 4; Pl. 16, Fig. 6 = *Gleditsia lyeliana* Hantke).
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene); Koilovtsi, Pelovo (Krivodol Formation, Volhynian); Karbintsi (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

SORBUS L. – ROSACEAE

***Sorbus* aff. *S. aria* (L.) Crantz**

1929. Stojanoff & Stefanoff, p. 73, Figs-text 20.3-4.
1956. Kitanov & Nikolova, p. 106.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

STACHYS L. – LAMIACEAE

***Stachys palustris* L. foss.**

1982. Palamarev, p. 23, Pl. 6, Fig. 10.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

STAPHYLEA L. – STAPHYLEACEAE

***Staphylea microsperma* Negru**

1968. Negru, p. 1733, Pl. 3, Figs 2-4.
1987. Palamarev & Petkova, p. 121, Pl. 30, Figs 2-3, 6.
1968. *Zanthoxylum* cf. *planispinum* Siebold & Zucc.; Palamarev, p. 205, Pl. 40, Figs 21-23; Fig.-text 6.
1971. Palamarev, p. 161.

Material: Ca.
Location and stratigraphical range: Drenovets, Krivodol, Slavotin (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Staphylea pliocaenica* Kink.**

1908. Kinkelin in Engelhardt & Kinkelin, p. 265, Pl. 32, Fig. 21.
1970. Palamarev, p. 50, Pl. 3, Fig. 17.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

STEPHANIA Lour. – MENISPERMACEAE

***Stephania* aff. *venosa* (Blume) Spreng.**

1973. Palamarev, p. 83.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

STERCULIA L. – STERCULIACEAE

***Sterculia labrusca* Unger**

1850a. Unger, p. 68, Pl. 28, Figs 1-14.
1963b. Palamarev, p. 78, Pl. 2, Fig. 23.
1967. Palamarev, p. 94.
1988. Černjavska & al., p. 30, Pl. 2, Fig. 7.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

STEWARTIA L. – THEACEAE

Stewartia pliocenica Stef. & Ganchev

1951. Stefanov & Ganchev, p. 167, Fig.-text 3 (nom. subnudum).
Rev. 1995. *Stewartia stefanovii* Palam. & Bozukov; Bozukov & Palamarev, p. 185, Figs 15, 18, 21.

***Stewartia stefanovii* Palam. & Bozukov**

1995. Palamarev & Bozukov in Bozukov & Palamarev, p. 185, Figs 15, 18, 21.
1999. Bozukov, p. 49.
1951. *S. pliocenica* Stef. & Ganchev; Stefanov & Ganchev, p. 167, Fig. 3 (nom. subnudum).
Holotypus: 1951. Stefanov & Ganchev, Fig. 3, (N Sat-1538), Bozukov & Palamarev (1995).
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation – Middle Miocene).
Collection: IB (BAS).

***Stewartia submonadelpha* Tanai & Onoe**

1961. Tanai & Onoe, 53, Pl. 18, Fig. 6.
1995. Bozukov & Palamarev, p. 188, Figs 16-17, 20.
1999. Bozukov, p. 49.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

STYRAX L. – STYRACACEAE

***Styrax obassia* Siebold & Zucc. foss.**

1883. Nathorst, p. 50, Pl. 10, Figs 2-6; Pl. 11, Fig. 7.
1975. Palamarev & Kitanov, p. 79, Pl. 1, Fig. 4.
1999. Bozukov, p. 60, Pl. 5, Fig. 2.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

SWIDA Opiz (= *Thelycrania* Endl.) – CORNACEAE

***Swida discimontana* Mai**

1982. Mai in Mai & Gregor, p. 413, Pl. 19, Figs 1-8; Fig.-text 5.
1997. Mai & Palamarev, p. 491, Pl. 4, Figs 7-8.
Material: Ca.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

SYMPLOCOS Jacq. – SYMPLOCACEAE

***Symplocos brezanii* Palam.**

1966. Palamarev in Palamarev & Petkova, p. 60, Pl. 4, Fig. 1; Pl. 5, Fig. 1a.
Material: Li.
Location and stratigraphical range: Brezhani (Go-

reshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***Symplocos lignitarum* (Quenst.) Kirchh.**

1957. Kirchheimer, p. 318, Pl. 50, Fig. 190.
1989. Palamarev, p. 50, Pl. 3, Figs 1-3, 5.
1867. *Carpolithus lignitarum* Quenst.; Quenstedt, p. 914, Pl. 86, Fig. 135.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Symplocos minutula* (Sternb.) Kirchh.**

1949. Kirchheimer, p. 16, Pl. 1, Fig. 6; Pl. 2, Fig. 16.
1989. Palamarev, p. 50, Pl. 3, Fig. 6.
1994b. Palamarev, p. 28, Pl. 5, Fig. 6.
1825. *Carpolithes minutulus* Sternb.; Sternberg, p. 44, Pl. 53, Fig. 8.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Symplocos cf. *paniculata* (Thunb.) Miq.

1971. Palamarev, p. 157, Pl. 24, Figs 4-5, 15.
Rev. 1989. *Symplocos salzhausensis* (Ludw.) Kirchh.; Palamarev, p. 51, Pl. 5, Figs 7-8.

***Symplocos salzhausensis* (Ludw.) Kirchh.**

1935. Kirchheimer, p. 718, Fig.-text 19.
1989. Palamarev, p. 51, Pl. 4, Figs 7-8.
1971. *Symplocos* cf. *paniculata* (Thunb.) Miq.; Palamarev, p. 157, Pl. 24, Figs 4-5, 15.
1860. *Carpinus salzhausensis* Ludw.; Ludwig, p. 100, Pl. 33, Fig. 8.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Symplocos similis* Kolak.**

1976. Kolakovsky in Kolakovsky & Schakryl, p. 140, Pl. 20, Fig. 7.
1987. Palamarev & Petkova, p. 101, Pl. 26, Fig. 4.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***SYMPHORICARPOS* Duhamel – CAPRIFOLIACEAE**

***Symphoricarpos* aff. *S. racemosa* Michx.**

1934. Stefanov & Jordanov, p. 35, Pl. 3, Fig. 20; Pl. 8, Figs 17-18.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***TABERNAEMONTANA* Plum. – APOCYNACEAE**

***Tabernaemontana telaginensis* Avakov**

1979. Avakov, p. 73, Pl. 24, Figs 5-6; Fig.-text 10.
1994. Palamarev & Petkova, p. 37, Pl. 2, Fig. 9; Pl. 3, Figs 4, 6.
1999a. Palamarev & al., p. 39, Pl. 4, Fig. 4.
Material: Li.
Location and stratigraphical range: Boukovo (Third Terrigenous Formation, Lower Oligocene); Gela, Goudevitsa (Argillaceous sandstone formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

***TERMINALIA* L. – COMBRETACEAE**

***"Terminalia" radobojana* Unger**

1847. Unger, p. 142, Pl. 48, Figs 1-2.
1932. Konjarov, p. 54, Pl. 22, Fig. 4.
1961. Palamarev, p. 187, Pl. 6, Fig. 3.
1964a. Palamarev, p. 30.
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Lower Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: Its belonging to genus *Terminalia* is uncertain.

***TERNSTROEMITES* Berry – THEACEAE**

***Ternstroemites floersheimensis* Kvaček & H. Walther**

1984. Kvaček & Walther, p. 338, Pl. 62, Figs 1-5.
1999a. Palamarev & al., p. 34, Pl. 4, Figs 1, 6.
1999b. Palamarev & al., p. 16, Pl. 5, Fig. 6.
Material: Li.

Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene).
Collection: IB (BAS).

TETRASTIGMA Planch. – VITACEAE

Tetrastigma chandlerae Kirchh.

1938. Kirchheimer, p. 337, Pl. 4, Figs 16-20.
1989. Palamarev, p. 53, Pl. 5, Figs 1-2.
1994b. Palamarev, p. 30, Pl. 4, Fig. 1.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Tetrastigma lobata Chandler

1926. Chandler, Pl. 4, Figs 3a-c.
1925. Chandler, p. 32 (nom. nudum).
1970. Palamarev, p. 52, Pl. 4, Figs 4-5.
1987. Palamarev & Petkova, p. 139, Pl. 35, Figs 3-4.
1989. Palamarev, p. 53, Pl. 5, Figs 4-5.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Drenovets, Hayredin (Krivodol Formation, Bessarabian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

THALICTRUM L. – RANUNCULACEAE

Thalictrum ex gr. *minus* L.

1982. Palamarev, p. 12, Pl. 4, Fig. 5.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

THEVETIA Adans. – APOCYNACEAE

Thevetia sophiae (C.O. Weber) Palam. & Petkova

1994. Palamarev & Petkova, p. 41, Pl. 1, Fig. 5; Pl. 2; Figs 1-2, 4.
1999a. Palamarev & al., p. 39.
2000. Bozukov, p. 26, Pl. 4, Fig. 4.
2001. Palamarev & al., p. 290.
1852. *Echitonium sophiae* C.O. Weber; Weber, p. 187, Pl. 20, Figs 17a-b.
1932. Konjarov, Pl. 28, Fig. 4; p. 129, Pl. 43, Figs 2-2a.
1961. Palamarev, p. 189, Pl. 8, Fig. 2; Figs-text 26a-b.
1964a. Palamarev, p. 32.
1967. Palamarev, p. 97.
1967. Petkova, p. 149, Pl. 13, Fig. 9.
1987. Palamarev & Petkova, p. 156, Pl. 39, Fig. 7.
1932. *Salix varians* Göpp.; Konjarov, p. 228, Pl. 69, Fig. 3.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Belitsa (Sandstone and sandy argillaceous formation, Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous Formation, Lower Oligocene); Dospei (Bituminous schist formation, Lower Oligocene); Gozdyuvska Mahala (Gozdevitsa sandy-conglomerate Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Medovnitsa (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

TILIA L. – TILIACEAE

Tilia aff. *T. argentea* Desf.

1963. Jordanov & Kitanov, p. 32, Pl. 3, Fig. 1; Fig.-text 5.
Material: Blossom impression.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

Tilia aff. *tomentosa* Moench

1999b. Bozukov, p. 53, Fig. 2, Pl. 5.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Tilia cf. *uralensis* Dorof.

1977. Dorofeev, p. 72, Pl. 13, Figs 1-5.
1994a. Palamarev, p. 140, Pl. 3, Fig. 7.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

TODDALIA Juss. – RUTACEAE

***Toddalia maii* Gregor**

1975. Gregor, p. 125, Figs-text 4-5.
1997. Mai & Palamarev, p. 489, Pl. 3, Figs 7-8; Pl. 4, Fig. 4.
Material: Ca.
Location and stratigraphical range: Oranovo (Simitli Formation, Maeotian); West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

***Toddalia naviculaeformis* (E. Reid) Gregor**

1975. Gregor, p. 125, Fig.-text 7.
1997. Mai & Palamarev, p. 489, Pl. 4, Figs 1-3.
1923. *Martynia naviculaeformis* E. Reid; Reid, p. 327, Fig.-text 5a.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

TRAPA L. – TRAPACEAE

***Trapa* cf. *heeri* Fritsch**

1884. Fritsch, p. 26, Pl. 26, Figs 29-39, 41.
1994a. Palamarev, p. 142, Pl. 2, Fig. 7.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Trapa natans* L. foss.**

1963. Jordanov & Kitanov, p. 33, Pl. 3, Fig. 3; Fig.-text 6.
Material: Ca.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: Unkown.

TRICHOSANTHES L. – CUCURBITACEAE

***Trichosanthes* sp.**

1973. Palamarev, p. 84, Pl. 2, Figs 13-14.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

TRIGONOBALANOPSIS Kvaček & H. Walther – FAGACEAE

***Trigonobalanopsis exacantha* (Mai) Kvaček & H. Walther**

1988. Kvaček & Walther, p. 404, Pl. 47, Figs 1-14; Pl. 48, Figs 1-3; Pl. 49, Fig. 9, Pl. 55, Fig. 1.
1997. Mai & Palamarev, p. 485, Pl. 1, Figs 9-10; Pl. 2, Figs 1-2, 5.
1998. Palamarev & al., pp. 15, 19.
1970b. *Ttigonobalanus exacantha* Mai, p. 385, Pl. 1, Figs 11-26; Pl. 2, Figs 1-22; Pl. 3, Figs 1-6, 14-19.
Material: Ca.
Location and stratigraphical range: Bobovdol (Coal_ bearing formation, Upper Oligocene).
Collection: IB (BAS).

***Trigonobalanopsis rhamnoides* (Rossm.) Kvaček & H. Walther**

1988. Kvaček & Walther, p. 405, Pl. 49, Figs 1-8; Pl. 50, Figs 1-4; Pl. 51, Figs 1-6; Pl. 52, Figs 1-12; Pl. 53, Figs 1-12; Pl. 54, Figs 1-4.
1998. Palamarev & Mai, p. 236.
1999a. Bozukov, p. 3, Pl. 5, Fig. 1.
1999b. Palamarev & al., p. 14.
2001. Palamarev & al., p. 288, Pl. 1, Fig. 6.
1840. *Phyllites rhamnoides* Rossm.; Rossmässler, p. 35, Pl. 8, Figs 30-31.
1967. *Castanopsis dechenii* (C.O. Weber) Kräusel & Weyland; Palamarev, p. 93.
1987. Palamarev & Petkova, p. 65, Pl. 17, Figs 4-5, 8-9.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene); Goudevitsa (Goudevitsa Formation, Lower Eocene-Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene); Kladoroub-Ostrokaptsi, Rouzhintsi, Stoudeno Bouche, Tolovitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

TUBELA Dorof. – BETULACEAE

***Tubela rossica* Dorof.**

1982b. Dorofeev, p. 161, Pl. 160, Figs 1-16.
1987. Palamarev & Petkova, p. 77, Pl. 21, Fig. 9.
Material: Ca.
Location and stratigraphical range: Drenovets, Gabrovnitsa (Krivodol Formation, Volhynian).
Collection: IB (BAS).

TURPINIA Vent. – STAPHYLEACEAE

Turpinia ettingshausenii (Engelh.) Mai

1964. Mai, p. 95, Pl. 12, Figs 14-15; Pl. 14, Figs 6-14; Fig.-text 18.
1994b. Palamarev, p. 29, Pl. 3, Figs 5-6.
1997. Mai & Palamarev, p. 487, Pl. 3, Figs 1-2.
1870. *Leguminosites ettingshausenii* Engelh.; Engelhardt, p. 42, Pl. 11, Figs 8-9.
Material: Ca.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian); Slashten (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

ULMUS L. – ULMACEAE

Ulmus campestris L.

1940. Kitanov, p. 17, Pl. 2, Figs 2a-b.
1956. Kitanov & Nikolova, p. 99, Pl. 4, Fig. 3; Fig.-text 13.
Material: Ca, Li.
Location and stratigraphical range: Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: Unkown.

Ulmus campestris L.

1929. Stojanoff & Stefanoff, p. 65, Pl. 10, Fig. 6; Fig.-text 19.4.
Rev. 1984. *Ulmus minor* Mill. foss.; Kitanov, p. 53, Fig. 9.1.

Ulmus carpinoides Göpp.

1855. Göppert, p. 28, Pl. 13, Figs 4-8; Pl. 14, Fig. 1.
1932. Konjarov, p. 125, pars Pl. 33, Fig. 4.
1937. Konstantinov, sub sp. indet., Pl. 4, Fig. 15, det. Palamarev & Kitanov in Palamarev & al., p. 14, Pl. 1.
1961. Palamarev, p. 181, Fig.-text 11.
1998. Palamarev & al., pp. 14-15.
1998b. Bozukov, p. 10, Pl. 4, Fig. 4.
1932. *U. minuta* Göpp.; Konjarov, p. 54, Pl. 20, Fig. 5; p. 129, Pl. 42, Figs 6-7.
Material: Li.
Location and stratigraphical range: Borovets (Coalbearing formation, Lower Oligocene); Dospei (Bituminous schist formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Pernik (Coalbearing formation, Upper Oligocene); Satovcha (Sivik Formation, Middle Miocene); Oranovo-Simitli (Simitli Formation, Maeotian).
Collection: IB (BAS).

Ulmus carpinoides Göpp.

1932. Konjarov, p. 125, pars Pl. 33, Fig. 3 (Fig. 4 = *U. carpinoides* Göpp. s. str.); p. 129, Pl. 42, Fig. 8; p. 222, Pl. 64, Fig. 7.
1967. Palamarev, p. 93.
Rev. 1987. *Ulmus pyramidalis* Göpp.; Palamarev & Petkova, p. 55, pl 16, Figs 1-2; Pl. 21, Fig. 3.

Ulmus drepanodonta Grubov

1956. Grubov, p. 100, Pl. 29, Fig. 1; Pl. 34, Fig. 34, Fig. 1; Pl. 35, Figs 1-3; Pl. 36, Figs 1-2; Pl. 37, Figs 1-2, 3b-5.
1999b. Palamarev & al., p. 16.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Lower Eocene – Lower Oligocene).
Collection: IB (BAS).

Ulmus longifolia Unger

1940. Kitanov, p. 15, Pl. 3, Fig. 3.
1961. Palamarev, p. 182, Pl. 4, Fig. 1.
1962. Hadžiev & Palamarev, p. 8.
1984. Kitanov, p. 53, Fig. 8: 2.
Rev. 1987. *Ulmus pyramidalis* Göpp.; Palamarev & Petkova, p. 55, Pl. 16, Figs 1-2; Pl. 21, Fig. 3.

Ulmus minor Mill. foss.

1984. Kitanov, p. 53, Fig. 9.1.
1929. *U. campestris* L.; Stojanoff & Stefanoff, p. 65, Pl. 10, Fig. 6; Fig.-text 19.4.
1935. *Ulmus* sp.; Stefanov & Jordanov, p. 45, Fig. 42.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian); Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Ulmus minuta Göpp.

1932. Konjarov, p. 54, Pl. 20, Fig. 5; p. 129, Pl. 42, Figs 6-7.
Rev. *Ulmus carpinoides* Göpp.; Palamarev, hoc loco.

***Ulmus pyramidalis* Göpp.**

1855. Göppert, p. 28, Pl. 13, Figs 10-12.
1937. Konstantinov, sub sp. indet., Pl. 5, Figs 6, 8-9, det. Palamarev & Kitanov in Palamarev & al. 1998, p. 14, Pl. 1.
1987. Palamarev & Petkova, p. 55, Pl. 16, Figs 1-2; Pl. 21, Fig. 3.
1998. Palamarev & al., pp. 14-15.
1932. *U. carpinoides* Göpp.; Konjarov, p. 125, pars Pl. 33, Fig. 3 (non Fig. 4 = *U. carpinoides* Göpp. s. str.); p. 129, Pl. 42, Fig. 8; p. 222, Pl. 64, Fig. 7.
1967. Palamarev, p. 93.
1940. *U. longifolia* Unger; Kitanov, p. 15, Pl. 3, Fig. 3.
1961. Palamarev, p. 182, Pl. 4, Fig. 1.
1962. Hadžiev & Palamarev, p. 8.
1984. Kitanov, p. 58, Fig. 8.2.
Material: Li.
Location and stratigraphical range: Dospei (Bituminous schist formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Kladoroub-Ostrokaptsi, Rouzhintsi, Telish (Krivodol Formation, Volhynian); Cherno Pole, Karbintsi (Krivodol Formation, Bessarabian); Oranovo-Simitli (Simitli Formation, Maeotian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

VACCINIUM L. – ERICACEAE

Vaccinium acheronticum Unger

1964a. Palamarev, p. 31, Fig. 46.
Rev. 1987. *Anagyris foetida* L. foss.; Palamarev & Petkova, p. 112, Pl. 29, Fig. 5.

***"Vaccinium" arctostaphylos* L.**

1934. Stefanov & Jordanov, p. 32, Pl. 3, Fig. 18, Pl. 8, Figs 14-15.
1935. Stefanov & Jordanov, p. 72, Pl. 24, Fig. 1.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.
Note: The systematic affinity to genus *Vaccinium* is questionable.

***"Vaccinium" myrtillus* L.**

1935. Stefanov & Jordanov, p. 72, Pl. 24, Fig. 2; Fig.-text 77.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.
Note: The systematic affinity to genus *Vaccinium* is questionable.

***"Vaccinium" uliginosum* L.**

1929. Stojanoff & Stefanoff, p. 86, Pl. 11, Fig. 18; Pl. 12, Figs 16-17; Fig.-text 22.9.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.
Note: The systematic affinity to genus *Vaccinium* is questionable.

***"Vaccinium" vitis-idaea* L.**

1929. Stojanoff & Stefanoff, p. 87, Pl. 12, Fig. 24; Fig.-text 22.10-11.
1934. Stefanov & Jordanov, p. 31, Pl. 8, Figs 12-13.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.
Note: The systematic affinity to genus *Vaccinium* is questionable.

***"Vaccinium"* sp. aff. *V. caespitosum* L.**

1934. Stefanov & Jordanov, p. 32, Pl. 3, Fig. 17, Pl. 7, Fig. 15.
1935. Stefanov & Jordanov, p. 72, Pl. 24, Fig. 4-5; Fig.-text 78.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.
Note: The systematic affinity to genus *Vaccinium* is questionable.

VIBURNUM L. – CAPRIFOLIACEAE

***Viburnum cukurovense* Palam.**

1971. Palamarev, p. 159, Pl. 22, Figs 18-19; Pl. 24, Figs 10, 12-14.

Holotypus: Pl. 22, Fig. 18; Pl. 24, Fig. 13, Palamarev (1971).
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

Viburnum lantana L.

1929. Stojanoff & Stefanoff, p. 92, Pl. 12, Fig. 21.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Viburnum sp. aff. *V. nudum* L.

1934. Stefanov & Jordanov, p. 34, Pl. 1, Fig. 12; Pl. 8, Fig. 16.
Material: Li.
Location and stratigraphical range: Sofia basin (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Viburnum sp. aff. *V. prunifolium* L.

1934. Stefanov & Jordanov, p. 34, Pl. 1, Fig. 13.
1935. Stefanov & Jordanov, p. 75, Fig.-text 83.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Viburnum aff. *sargentii* Koehne

2000. Bozukov, p. 27, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

VISCOPHYLLUM Knoll – LORANTHACEAE

Viscophyllum morlotii (Unger) Knoll

1988. Černjavska & al., p. 31.
Rev. *Viscum morlotii* (Unger) Knobloch & Kvaček; Palamarev, hoc loco.

VISCUM L. – VISCACEAE

Viscum album L. foss.

1963. Jordanov & Kitanov, p. 30, Pl. 2, Fig. 2; Fig.-text 3-4.
Rev. 1996. *Viscum morlotii* (Unger) Knobloch & Kvaček; Uzunova, p. 32, Pl. 5, Fig. 3, Pl. 6, Figs 1-2.

Viscum morlotii (Unger) Knobloch & Kvaček

1976. Knobloch & Kvaček, p. 67, Pl. 12, Fig. 17; Pl. 17, Figs 5, 13; Pl. 33, Figs 4-11.
1996. Uzunova, p. 32, Pl. 5, Fig. 3, Pl. 6, Figs 1-2.
1963. *V. album* L. foss.; Jordanov & Kitanov, p. 30, Pl. 2, Fig. 2; Fig.-text 3-4.
1852. *Potamogeton morlotii* Unger, p. 88, Pl. 29, Figs 6-8.
1988. *Viscophyllum morlotii* (Unger) Knoll; Černjavska & al., p. 31.
Material: Cu, Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene), Karbintsi, Rouzhintsi (Krivodol Formation, Volhynian); Drenovets, Hairedin (Krivodol Formation, Bessarabian); Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

VITIS L. – VITACEAE

Vitis parasylvestris Kirchh.

1941. Kirchheimer, p. 650, Fig. 9.
1994a. Palamarev, p. 143, Pl. 3, Figs 8-9.
1982. *Vitis* sp., Palamarev, p. 21, Pl. 7, Figs 3, 6.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Middle Pontian-Lower Dacian).
Collection: IB (BAS).

Vitis sylvestris C.C. Gmel. foss.

1956. Kitanov & Nikolova, p. 108, Pl. 7, Fig. 2; Fig.-text 19.
1984. Kitanov, p. 65, Pl. 14.4.
Material: Li.
Location and stratigraphical range: Gurmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Sofia basin – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***Vitis stricta* (Göpp.) Knobloch**

1969. Knobloch, p. 125, Pl. 64, Fig. 9; Fig.-text 269.
1987. Palamarev & Petkova, p. 137, Pl. 36, Figs 1-2.
1855. *Acer strictum* Göppert, p. 35, Pl. 23, Figs 1-5.
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Vitis teutonica* A. Braun emend. Kirchh.**

1854. Braun, p. 147, Pl. 3, Figs 8-17.
1937. Kirchheimer, p. 91, Pl. 9, Figs. 3a-d.
1982. Palamarev, p. 21, Pl. 7, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Vitis vitifolia* (A. Braun) Proch. & Bůžek**

1975. Prochazka & Bůžek, p. 61.
1987. Palamarev & Petkova, p. 138, Pl. 36, Fig. 5.
1845. *Acer vitifolium* A. Braun, p. 172
Material: Li.
Location and stratigraphical range: Kladoroub-Ostrokaptsi, Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Vitis sp.

1982. Palamarev, p. 21, Pl. 7, Figs 3, 6.
Rev. 1994a. *Vitis parasylvestris* Kirch.; Palamarev, p. 143, Pl. 3, Figs 8-9.

***XOLISMA* Raf. – ERICACEAE**

***Xolisma* sp. aff. *X. (Andromeda) ferruginea* (Walt.) A. Heller**

1935. Stefanov & Jordanov, p. 68, Pl. 24, Fig. 4; Fig.-text 71.
Material: Li.
Location and stratigraphical range: Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***ZANTHOXYLUM* L. – RUTACEAE**

***Zanthoxylum bognorense* (Chandler) Palam.**

1973. Palamarev, p. 87, Pl. 3, Fig. 7.
1961. *Rutaspermum bognorense* Chandler, p. 192, Pl. 19, Fig. 3.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

***Zanthoxylum rugosum* (Chandler) Palam.**

1973. Palamarev, p. 87, Pl. 3, Figs 8-9.
1963. *Rutaspermum rugosum* Chandler, p. 94, Pl. 15, Figs 4-15.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

Zanthoxylum cf. *planispinum* Siebold & Zucc.

1968. Palamarev, p. 205, Pl. 40, Figs 21-23; Fig.-text 6.
1971. Palamarev, p. 161.
Rev. 1987. *Staphylea microsperma* Negru; Palamarev & Petkova, p. 121, Pl. 30, Figs 2-3, 6.

***Zanthoxylum serratum* Heer**

1859. Heer, p. 86, Pl. 127, Figs 13-16.
1964b. Palamarev, p. 133, Pl. 7, Fig. 2.
1967. Palamarev, p. 96.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

***ZELKOVA* Spach – ULMACEAE**

***Zelkova* sp. aff. *Z. acuminata* Planch.**

1929. Stojanoff & Stefanoff, p. 67, Fig.-text 20.1-2.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

Zelkova carpinifolia (Pall.) K. Koch foss.

1984. Kitanov, p. 53, Fig. 8.4.
Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

Zelkova crenata Spach

1929. Stojanoff & Stefanoff, p. 66, Pl. 10, Figs 7-10; Fig.-text 19.1-3, 5.
1940. Kitanov, p. 15, Pl. 5, Figs 2a-f.

1956. Kitanov & Nikolova, p. 98, Pl. 4, Figs 1-2; Fig.-text 12.
Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

1934. Stefanov & Jordanov, p. 20, Pl. 7, Figs 7-10.
Rev. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev, hoc loco.

Zelkova praelonga Berger

1951. Berger, p. 276, Fig.-text 7-8.
1963b. Palamarev, p. 74, Pl. 2, Fig. 13.
1967. Palamarev, p. 93.
Material: Li.
Location and stratigraphical range: Brezhani (Goreshtitsa Formation, Lower Oligocene).
Collection: IB (BAS).

Zelkova ungeri Kováts

1932. Konjarov, p. 54, Pl. 7; p. 98, Pl. 7; p. 125, Pl. 34, Figs 1-4.
1937. Konstantinov, p. 262, Pl. 4, Figs 4-9.
1964a. Palamarev, p. 18.
Rev. 1987. *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.

Zelkova zelkovifolia (Unger) Bůžek & Kotl.

1963. Bůžek & Kotlaba in Kotlaba, p. 59, Pl. 3, Figs 7-8.
1987. Palamarev & Petkova, p. 57, Pl. 15, Fig. 3.
1988. Palamarev & Kitanov, p. 187, Pl. 4, Figs 4, 6, 9.
1995. Palamarev & Staneva, p. 188, Pl. 2, Fig. 2.
1998. Palamarev & al., pp. 14-15.
1998. Bozukov, p. 10, Pl. 2, Fig. 3.
1929. *Z. crenata* Spach; Stojanoff & Stefanoff, p. 66, Pl. 10, Fig. 7-10; Figs-text 19.1-3, 5.
1934. Stefanov & Jordanov, p. 20, Pl. 7, Figs 7-10.
1940. Kitanov, p. 15, Pl. 5, Figs 2a-f.
1932. *Z. ungeri* Kováts; Konjarov, p. 54, Pl. 7; p. 98, Pl. 7; p. 125, Pl. 34, Figs 1-4.
1937. Konstantinov, p. 262, Pl. 4, Figs 4-9.
1956. Kitanov & Nikolova, p. 98, Pl. 4, Fig. 1-2; Fig.-text 12.
1964a. Palamarev, p. 18.
1984. *Z. carpinifolia* (Pall.) K. Koch foss.; Kitanov, p. 53, Fig. 8.4.
1843. *Ulmus zelkovifolia* Unger, p. 405, pars Pl. 24, Figs 9-12 (non Pl. 24, Fig. 8, 13 = *Zelkova* sp.
1929. *Lamium* aff. *galeobdolon* Crantz; Stojanoff & Stefanoff, p. 92, Pl. 12, Fig. 20.
1929. *Rhus coriaria* L.; Stojanoff & Stefanoff, p. 80, Pl. 9, Fig. 10; Fig.-text 21.2.
1929. *Betula* sp. aff. *B. corylifolia* Regel & Maxim.; Stojanoff & Stefanoff, p. 40, Pl. 5, Fig. 3; Fig.-text 10.2.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Dospei (Bituminous shist formation, Lower Oligocene); Brezhani (Goreshtitsa Formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Rouzhintsi (Krivodol Formation, Volhynian); Byalo Pole, Dalgo Pole, Smirnenski (Krivodol Formation, Bessarabian); Oranovo-Simitli (Simitli Formation, Maeotian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

ZIZIPHUS Mill. – RHAMNACEAE

Ziziphus ungeri (Unger) Heer

1956. Baikovskaja, p. 404, Pl. 1, Fig. 2.
Rev. 1975. *Ziziphus ziziphoides* (Unger) Weyland; Palamarev & Petkova, p. 222, Pl. 3, Figs A-B.

Ziziphus ziziphoides (Unger) Weyland

1948. Weyland, p. 113.
1975. Palamarev & Petkova, p. 205, Pl. 3, Fig. A-B.
1995. Palamarev & Staneva, p. 119.
1998. Palamarev & al., p. 15.
1999a. Palamarev & al., p. 38.
1999b. Palamarev & al., p. 19, Pl. 4, Fig. 5.
2001. Palamarev & al., p. 290.
1956. *Z. ungeri* Heer; Baikovskaja, p. 404, Fig. 2.
1962b. *Z. paradisiacus* (Unger) Heer; Palamarev, p. 18, Fig.-text 2v.
1847. *Ceanothus ziziphoides* Unger, p. 145, Pl. 49, Fig. 10.
Material: Li.
Location and stratigraphical range: Hvoina (Pavelsko sandy argillaceous Formation, Lower Eocene-Lower Oligocene); Pchelarovo (Sandy argillaceous formation, Upper Eocene); Boboshevo (Unpointed stratigraphic unit, Priabonian – Lower Oligocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene); Padesh (Padezh Formation, Upper Eocene – Lower Oligocene); Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Boukovo (Third Terrigenous

Formation, Lower Oligocene); Gozdyuvska Mahala (Gozdevitsa sandy-conglomerate Formation, Lower Oligocene); Pustrogor (Pustrogor formation, Lower Oligocene); Raikova mogila (Pustrogor formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Borovets (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

2. Class LILIOPSIDA

AGROSTIS L. – POACEAE

Agrostis cf. *stolonifera L.*

2001. Uzunova, p. 6, Pl. 7, Fig. 5.
Material: Cu.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

ALISMA L. – ALISMATACEAE

Alisma plantago-pliocenica Nikitin

1957. Nikitin, p. 107, Pl. 2, Figs 27-28.
1970. Palamarev, p. 55, Pl. 4, Figs 2-3.
Material: Ca.
Location and stratigraphical range: Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

APONOGETON L. f. – APONOGETONACEAE

Aponogeton cf. *tertiarius* Zhilin

1974. Zhilin, p. 1204, Pl. 1, Figs 1a, 2-5; Fig.-text 2.1-3.
2001. Palamarev & al., p. 292, Pl. 4, Fig. 5.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene).
Collection: IB (BAS).

ARACEOPHYLLUM Kräusel – ARACEAE

Araceophyllum elongatum Juchniewicz

1975. Juchniewicz, p. 129, Pl. 33, Figs 5-6.
2001. Uzunova, p. 5, Pl. 6, Fig. 1.
Material: Cu.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

ARUNDO L. – POACEAE

Arundo goepperti Heer

1855. Heer, p. 62, Pl. 22, Fig. 3; Pl. 23, Fig. 1.
1964a. Palamarev, p. 32, Pl. 13, Fig. 3.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

BAMBUSA Schreb. – POACEAE

Bambusa lugdunensis Saporta & Marion

1876. Saporta & Marion, p. 94, Pl. 23, Figs 8-16.
1962. Kitanov & Palamarev, p. 11, Pl. 2, Fig. 1b; Fig.-text 7.
1966. Palamarev & Petkova, p. 50.
Material: Li.
Location and stratigraphical range: Devin (Devin Formation, Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene).
Collection: Unkown.

BUTOMUS L. – BUTOMACEAE

Butomus cf. *hypericoides* Mai

1994a. Palamarev, p. 146, Pl. 4, Fig. 6.
1987. Mai, p. 116, Pl. 8, Figs 10-12.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi, Maeotian).
Collection: IB (BAS).

Butomus aff. *umbelatus* L.

1970. Palamarev, p. 55, Pl. 4, Fig. 15.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

CALDESIA Parl. – ALISMATACEAE

***Caldesia cylindrica* (E. Reid) Dorof.**

1963. Dorofeev, p. 1424, Pl. 2, Fig. 10.
1987. Palamarev & Petkova, p. 144, Pl. 37, Fig. 4.
1920. *Myriophyllum cylindricum* E. Reid; Reid, p. 71. Pl. 4, Figs 2-4.
Material: Ca.
Location and stratigraphical range: Drenovets (Krivodol Formation, Bessarabian); Gabare, Krivodol (Krivodol Formation, Volhynian).
Collection: IB (BAS).

CAREX L. – CYPERACEAE

***Carex* aff. *acutiformis* Ehrh. foss.**

1965. Palamarev, p. 139, Pl. 2, Figs 15-16; Pl. 4, Figs 21-25.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Carex flagellata* C. & E. Reid**

1915. Reid & Reid, p. 69, Pl. 3, Figs 22-26.
1982. Palamarev, p. 26, Pl. 8, Figs 10-12.
1987. Palamarev & Petkova, p. 150, Pl. 38, Figs 3-4.
1994a. Palamarev, p. 150, Pl. 4, Fig. 11.
Material: Ca.
Location and stratigraphical range: Gabrovnitsa (Krivodol Formation, Volhynian); Bela Rada (Krivodol Formation, Volhynian-Bessarabian); Drenovets, Hairedin (Krivodol Formation, Bessarabian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Carex* aff. *flava* L. foss.**

1965. Palamarev, p. 140, Pl. 2, Figs 21-22; Pl. 4, Figs 18-21.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Carex* aff. *pseudocyperus* L. foss.**

1965. Palamarev, p. 140, Pl. 2, Fig. 17.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

CARICOIDEA Chandler – CYPERACEAE

***Caricoidea johnstrupii* (Hartz) Palam.**

1987. Palamarev in Palamarev & Petkova, p. 152, Pl. 38, Fig. 7; Pl. 39, Figs 3-4.
1909. *Carpolithus johnstrupii* Hartz, p. 58, Pl. 3, Figs 11-13; Pl. 4, Figs 18-21.
1968. *Sparganium chomutovense* Bůžek & Holy; Palamarev, p. 207, Pl. 40, Fig. 32; Fig.-text 8.
Material: Ca.
Location and stratigraphical range: Gabare, Krivodol (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Caricoidea jugata* (P. Nikitin) Mai**

1978 Mai in Mai & Walther, p. 141, Pl. 48, Figs 35-36.
1989. Palamarev, p. 54, Pl. 4, Fig. 6.
1958. *Aracispermum jugatum* P. Nikitin in Dorofeev, p. 543, Pl. 1, Figs 8-9.
1971. *Sparganium chomutovense* Bůžek & Holý; Palamarev, p. 154, Pl. 23, Figs 18-19.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene.
Collection: IB (BAS).

***Caricoidea minima* (Chandler) Chandler**

1961. Chandler, p. 105, Pl. 24, Figs 18-21.
1973. Palamarev, p. 98, Pl. 6, Figs 10-12.
1925. *Cladium minimum* Chandler, p. 14, Pl. 1, Figs 5a-b.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Caricoidea obscura* Chandler**

1960. Chandler, p. 207, Pl. 30, Figs 27-33.
1973. Palamarev, p. 98, Pl. 6, Figs 13-15.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

CAULINIA Willd. – NAJADACEAE

***Caulinia aspera* (C. & E. Reid) Dorof.**

1978. Dorofeev, p. 1098, Pl. 6, Figs 12-15, Pl. 7, Fig. 81.
1994a. Palamarev, p. 148, Pl. 5, Fig. 13.
1915. *Najas aspera* C. & E. Reid; Reid & Reid, p. 62, Pl. 2, Figs 15-17.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

CHAMAEROPS L. – ARECACEAE

***Chamaerops helvetica* Heer**

1855. Heer, p. 86, Pls 31-32.
1998. Palamarev & al., pp. 15, 19.
Material: Li.
Location and stratigraphical range: Bobovdol (Coal-bearing formation, Upper Oligocene).
Collection: IB (BAS).

CLADIOCARYA E. Reid & Chandler – CYPERACEAE

***Cladiocarya maxima* Palam.**

1997. Palamarev in Mai & Palamarev, p. 493, Pl. 6, Figs 3-4, 6-8.
Holotypus: Pl. 6, Fig. 3, Mai & Palamarev (1997).
Material: Ca.
Location and stratigraphical range: Oranovo (Simitli Formation, Maeotian).
Collection: IB (BAS).

CLADIUM R. Br. – CYPERACEAE

***Cladium* cf. *miocaenicum* Dorof.**

1988. Dorofeev, p. 57, Pl. 10, Figs 11-14.
1994a. Palamarev, p. 149, Pl. 4, Fig. 10.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

***Cladium oligovasculare* Mai**

1978. Mai in Knobloch, p. 158, Pl. 1, Figs 1-3, 8-9.
1997. Mai & Palamarev, p. 493, Pl. 5, Figs 7-9.
Material: Ca.
Location and stratigraphical range: Oranovo (Simitli Formation, Maeotian); West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

***Cladium palaeomariscus* Dorof.**

1966. Dorofeev, p. 29.
1997. Mai & Palamarev, p. 493, Pl. 6, Figs 1-2, 5.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

***Cladium quinquesulcatum* Palam.**

1994a. Palamarev, p. 149, Pl. 4, Figs 12-15.
Holotypus: Pl. 4, Fig. 15, Palamarev (1994a).
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene) Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

CYPERACITES Schimp. – CYPERACEAE

***Cyperacites chavannesii* (Heer) Schimp.**

1870. Schimper, p. 415.
1932. Konjarov, p. 98, Pl. 24, Fig. 3.
1937. Konstantinov, p. 16, Fig. 1b.
1962b. Palamarev, p. 16, Fig. 1b.
1967. Petkova, p. 149, Pl. 8, Fig. 7.
1998. Palamarev & al., p. 14.
1999b. Palamarev & al., p. 21, Pl. 4, Fig. 7.
1855. *Cyperus chavannesii* Heer, p. 72, Pl. 22, Fig. 7.
Material: Li.
Location and stratigraphical range: Bobovdol (Coal-bearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Pelovo (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Cyperacites confertus* (Heer) Schimp.**

1870. Schimper, p. 415.
1855. *Cyperites confertus* Heer, p. 79, Pl. 29, Fig. 3.
1964a. Palamarev, p. 33, Pl. 14, Figs 2-3.
Material: Li.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

CYPERITES Heer – CYPERACEAE

Cyperites confertus Heer

1964a. Palamarev, p. 33, Pl. 14, Figs 2-3.
Rev. *Cyperacites confertus* (Heer) Schimp.; Palamarev, hoc loco.

CYPERUS L. – CYPERACEAE

Cyperus chavannesii Heer

1932. Konjarov, p. 98, Pl. 24, Fig. 3.
1937. Konstantinov, p. 16, Fig. 1b.
1962b. Palamarev, p. 16, Fig. 1b.
1967. Petkova, p. 149, Pl. 8, Fig. 7.
1998. Palamarev & al., p. 14.
Rev. 1999. *Cyperacites chavannesii* (Heer) Schimp.; Palamarev & al., p. 21, Pl. 4, Fig. 7.

DIOSCOREA L. – DIOSCOREACEAE

***Dioscorea liblarensis* (Kräusel & Weyland) Peters**

1963. Petrers, p. 15, Pl. 5, Figs 28-31.
1984. Uzunova, p. 74, Pl. 2, Figs 3-4.
2001. Uzunova, p. 5, Pl. 6, Fig. 2.
1954. *Dioscoreophyllum liblarense* Kräusel & Weyland, p. 118, Pl. 21, Figs 5-7; Pl. 22, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); East Maritsa basin – Troyanovo (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

DULICHIUM Pers. – CYPERACEAE

***Dulichium vespiforme* C. & E. Reid**

1915. Reid & Reid, p. 66, Pl. 3, Figs 8-12.
1965. Palamarev, p. 138, Pl. 1, Figs 7-8; Pl. 4, Fig. 28.
1970. Palamarev, p. 58, Pl. 5, Fig. 3.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

ELEOCHARIS R. Br. – CYPERACEAE

***Eleocharis palustris* (L.) M. Roem. & Schult. foss.**

1965. Palamarev, p. 138, Pl. 1, Fig. 9; Pl. 3, Fig. 13.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

EPIPREMNUM Schott – ARACEAE

***Epipremnum cristatum* Nikitin ex Dorof.**

1952. Dorofeev, p. 854, Pl. 2, Figs 13-14.
1970. Palamarev, p. 61, Pl. 6, Fig. 15; Pl. 7, Fig. 1.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Epipremnum ornatum* E. Reid & Chandler**

1926. Reid & Chandler, p. 83, Pl. 4, Figs 24-25.
1971. Palamarev, p. 160, Pl. 23, Figs 9-13.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).
Note: According to Gregor & Bogner (1984), *E. ornatum* belongs to a morpho-genus *Epipremnites*.

ERIOPHORUM L. – CYPERACEAE

***Eriophorum* aff. *gracile* Koch**

1970. Palamarev, p. 58, Pl. 6, Fig. 16.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

***Eriophorum sarmaticum* Palam.**

1987. Palamarev in Palamarev & Petkova, p. 151, Pl. 38, Figs 5-6.
Holotypus: Pl. 38, Fig. 6, Palamarev & Petkova (1987).
Material: Ca.
Location and stratigraphical range: Dryanovets, Gabare (Krivodol Formation, Volhynian); Hairedin (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

EULIMNOCARPUS (C. Reid) Collinson – POTAMOGETONACEAE

***Eulimnocarpus major* (Szafer) Collinson**

1982. Collinson, p. 94.
1987. Palamarev & Petkova, p. 146, Pl. 37, Fig. 3.
1961. *Ruppia major* Szafer, p. 87, Pl. 22, Figs 23-26; Pl. 23, Figs 1-6.
Material: Ca.
Location and stratigraphical range: Kladorub-Ostrokaptsi (Krivodol Formation, Volhynian); Drenovets (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

FREYCINETIA Gaudich. – PANDANACEAE

***Freycinetia rhenana* Weyland**

1957. Weyland, p. 36, Pl. 1, Fig. 1; Fig.-text 1.
1969. Palamarev & Uzunova, p. 130, Pl. 1, Figs 4-5.
1984. Uzunova, p. 81, Figs 4.4-5.
Material: Cu.
Location and stratigraphical range: Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

GLUMOPHYLLUM Weyland – SCHEUCHZERIACEAE

Glumophyllum rhenanum (Kräusel & Weyland) Weyland, Kilpper & Berendt

1973. Palamarev & Uzunova, p. 816, Fig.-text 3.2a.
Rev. 1984. *Scheuchzeria rhenana* (Kräusel & Weyland) Juchniewicz; Uzunova, p. 74, Fig. 2.1-2.

GRAMINOPHYLLUM Straus – POACEAE

***Graminophyllum* sp.**

1996. Uzunova, p. 33, Pl. 9, Figs 3-4.
Material: Cu.
Location and stratigraphical range: Drenovets (Krivodol Formation, Volhynian); Hairedin (Krivodol Formation, Bessarabian);
Collection: IB (BAS).

JUNCUS L. – JUNCACEAE

***Juncus* cf. *subnodulosus* Schrank**

2001. Uzunova, p. 5, Pl. 6, Figs 3-5.
Material: Ca.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

LEERSIA Sw. – POACEAE

***Leersia orysoides* (L.) Sw.**

1929. Stojanoff & Stefanoff, p. 25, Pl. 4, Fig. 2.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

LIMNOCARPUS E. Reid & Chandler – POTAMOGETONACEAE

***Limnocarpus forbesii* (Heer) Chandler**

1962. Chandler, p. 28, Pl. 7, Figs 22-24.
1973. Palamarev, p. 96, Pl. 6, Figs 6-9.
1862. *Cyperites forbesii* Heer, p. 373, Pl. 18, Figs 20-21.
Material: Ca.
Location and stratigraphical range: Rudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

LIVISTONA R. Br. – ARECACEAE

Livistona latania (Rossm.) Takht.

1964a. Palamarev, p. 34.
Rev. 2001. *Sabal lamanonis* (Brongn.) Heer; Palamarev & al., p. 292, Pl. 3, Fig. 5.

MARCODURIA – POTAMOGETONACEAE

Marcoduria inopinata Weyland

1969. Palamarev & Uzunova, p. 128, Pl. 1, Fig. 1.
Rev. 1984. *Phragmites inopinata* (Weyland) Juchniewicz; Uzunova, p. 76, Fig. 3.2.

MUSA L. – MUSACEAE

***Musa bilinica* Ettingsh.**

1866. Ettingshausen, p. 28, Pl. 6, Fig. 11; Pl. 7, Figs 4-5.
1964a. Palamarev, p. 34.
Material: Li.

Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

NAJAS L. – NAJADACEAE

***Najas marina* L. foss.**

1970. Palamarev, p. 58, Pl. 4, Fig. 14.
1982. Palamarev, p. 25, Pl. 8, Figs 6-8.
1987. Palamarev & Petkova, p. 147, Pl. 38, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Gabrovnitsa, Gramada (Krivodol Formation, Volhynian); Hairedin (Krivodol formation, Bessarabian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

PALMOPHYLLUM Conw. – ARECACEAE

***Palmophyllum* sp.**

1988. Černjavska & al., p 31, Pl. 3, Fig. 6.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).
Collection: IB (BAS).

PALMOSPERMUM E. Reid & Chandler – ARECACEAE

***Palmospermum* cf. *pulchrum* Chandler**

1973. Palamarev, p. 99, Pl. 7, Figs 1-3.
1961. *P. pulchrum* Chandler, p. 127, Pl. 13, Figs 25-31.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

PANDANUS L. – PANDANACEAE

***Pandanus rhenanus* Kräusel & Weyland**

1950. Kräusel & Weyland, p. 88, Pl. 3, Figs 1-7; Fig.-text 5.
1969. Palamarev & Uzunova, p. 131, Pl. 1, Figs 2-3; Pl. 2, Fig. 1-4; Fig.-text 3.
Material: Cu.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian).
Collection: IB (BAS).

PHOENICITES Brongn. – ARECACEAE

Phoenicites borealis Friedrich

1992. Palamarev & al., p. 5, Pl. 4, Fig. 3.
Rev. 1999b. *Phoenicites salicifolius* (C. Presl) Unger; Palamarev & al., p. 21, Pl. 9, Figs 3-4.

***Phoenicites salicifolius* (C. Presl) Unger**

1845. Unger, p. 184.
1992. *P. borealis* Friedrich; Palamarev & al., p. 5, Pl. 4, Fig. 3.
1999b. Palamarev & al., p. 21, Pl. 9, Figs 3-4.
1838. *Cycadites salicifolius* C. Presl in Sternberg, p. 195, Pl. 40, Fig. 1.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Phoenicites spectabilis* Unger**

1847. Unger, p. 39, Pl. 11, Fig. 1.
1999b. Palamarev & al., p. 21, Pl. 7, Fig. 1.
1992. *Phoenicites* cf. *spectabilis* Unger; Palamarev & al., p. 6, Pl. 3, Fig. 1, 4; Pl. 4, Fig. 1.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

***Phoenicites* sp.**

1992. Palamarev & al., p. 6, Pl. 4, Fig. 2; Pl. 5, Fig. 4.
1999b. Palamarev & al., p. 21, Pl. 7, Fig. 2.
Material: Li.
Location and stratigraphical range: Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).

PHRAGMITES Adans. – POACEAE

Phragmites communis Trin.

1935. Stefanov & Jordanov, p. 27, Pl. 6, Figs 1-3; Fig.-text 26.
1940. Kitanov, p. 7, Pl. 1, Fig. 3; Pl. 2, Fig. 1.

1956. Kitanov & Nikolova, p. 111, Pl. 9, Figs 3-4; Fig.-text 22.
1960. Kitanov, p. 374, Pl. 7, Fig. 2.
Rev. 1987. *Phragmites oeningensis* A. Braun ex Heer; Palamarev & Petkova, p. 154, Pl. 39, Fig. 10.

***Phragmites inopinatus* (Weylad) Juchniewicz**

1975. Juchniewicz, p. 128.
1984. Uzunova, p. 76, Fig. 3.2.
1957. *Marcoduria inopinata* Weyland, p. 37, Pl. 1, Figs 2-9.
1969. Palamarev & Uzunova, p. 128, Pl. 1, Fig. 1.
Material: Cu.
Location and stratigraphical range: West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Phragmites oeningensis* A. Braun ex Heer**

1855. Heer, p. 64, Pl. 22, Fig. 5; Pl. 24, Figs 1-10; Pl. 27, Fig. 2; Pl. 29, Fig. 3a.
1964a. Palamarev, p. 32, Pl. 13, Fig. 1.
1967. Petkova, Pl. 8, Fig. 5; Pl. 13, Fig. 10.
1987. Palamarev & Petkova, p. 154, Pl. 39, Fig. 10.
1998. Palamarev & al., p. 15.
1935. *Phragmites communis* Trin.; Stefanov & Jordanov, p. 27, Pl. 6, Figs 1-3; Fig.-text 26.
1940. Kitanov, p. 7, Pl. 1, Fig. 3; Pl. 2, Fig. 1.
1956. Kitanov & Nikolova, p. 111, Pl. 9, Figs 3-4; Fig.-text 22.
1960. Kitanov, p. 374, Pl. 7, Fig. 2.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing formation, Middle Miocene); Pelovo, Stavertsi (Krivodol Formation, Volhynian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

***POLYGONATUM* Mill. – LILIACEAE**

***Polygonatum* aff. *officinale* All.**

1929. Stojanoff & Stefanoff, p. 27, Pl. 4, Fig. 3; Fig.-text 6.2.
Material: Li.
Location and stratigraphical range: Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: Unkown.

***POTAMOGETON* L. – POTAMOGETONACEAE**

***Potamogeton acutifolius* Link foss.**

1965. Palamarev, p. 136, Pl. 1, Fig. 1; Pl. 3, Figs 1-4.
1970. *Potamogeton* cf. *acutifolius* Link.; Palamarev, p. 57, Pl. 4, Fig. 16.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Potamogeton* aff. *filiformis* Pers.**

1970. Palamarev, p. 57, Pl. 4, Fig. 17.
Material: Ca.
Location and stratigraphical range: Razlog (Razlog Coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Potamogeton martinianus* Sitár**

1969. Sitár, p. 112, Pl. 22, Fig. 4; Pl. 23, Figs 3-4; Pl. 27, Figs 1-2; Fig.-text 2.
1987. Palamarev & Petkova, p. 145, Pl. 37, Fig. 2.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

***Potamogeton minimus* Dorof.**

1963. Dorofeev, p. 103, Pl. 8, Figs 7-16; Fig.-text 14.18-22.
1997. Mai & Palamarev, p. 492, Pl. 3, Fig. 12; Pl. 4, Figs 1-3; Pl. 6, Fig. 9.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian); Melnik (Sandanski Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

***Potamogeton* aff. *natans* L. foss. (vel *P.* aff. *perfoliatus* L. foss.)**

1965. Palamarev, p. 137, Pl. 1, Figs 3-4; Pl. 3, Figs 8-12.
Material: Ca.

Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocane).
Collection: IB (BAS).

***Potamogeton nikitinii* Dorof.**

1966. Dorofeev, p. 49, Pl. 1, Figs 18-20; Fig.-text 6.
1997. Mai & Palamarev, p. 492, Pl. 5, Figs 4-6.
Material: Ca.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Elhovo basin – Izgrev (Elhovo Formation, Pontian).
Collection: IB (BAS).

***Potamogeton* aff. *nitens* C.O. Weber**

1970. Palamarev, p. 58, Pl. 4, Fig. 18.
Material: Ca.
Location and stratigraphical range: Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Potamogeton pectinatus* L. foss.**

1965. Palamarev, p. 137, Pl. 1, Fig. 2; Pl. 3, Fig. 6.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Potamogeton* aff. *perfoliatus* L. foss.**

1965. Palamarev, p. 137, Pl. 1, Figs 3-4; Pl. 3, Figs 8-12.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Potamogeton planus* P. Nikitin**

1957. Nikitin, p. 98, Pl. 2, Figs 2-3.
1994a. Palamarev, p. 148, Pl. 4, Fig. 9.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Potamogeton praenatans* Knoll**

1904. Knoll, p. 65, Figs 1-2.
1929. Stojanoff & Stefanoff, sub. *Potamogeton* sp., p. 25, Fig.-text 6.1, det. Palamarev & Kitanov 1988, p. 196.
1988. Palamarev & Kitanov, p. 196, Fig.-text 4.
Material: Li.
Location and stratigraphical range: Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Novi Iskur (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Potamogeton pusillus* L. foss.**

1965. Palamarev, p. 137, Pl. 1, Fig. 6; Pl. 3, Fig. 7.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

***Potamogeton* aff. *rutilus* Wolfg. foss.**

1965. Palamarev, p. 137, Pl. 1, Fig. 5; Pl. 3, Fig. 5.
Material: Ca.
Location and stratigraphical range: Belchin Bani (Relyovo Formation, Romanian-Pleistocene).
Collection: IB (BAS).

Potamogeton sp.

1929. Stojanoff & Stefanoff, p. 25, Fig.-text 6.1.
Rev. 1988. *Potamogeton praenatans* Knoll; Palamarev & Kitanov, p. 196, text-Fig. 4.

PUCCINELIA Parl. – POACEAE

***Puccinelia* cf. *distans* (L.) Parl.**

2001. Uzunova, p. 6, Pl. 7, Figs 1-2.
Material: Cu.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

RUPPIA L. – POTAMOGETONACEAE

***Ruppia maritima-miocaenica* Szafer**

1961. Szafer, p. 85, Pl. 22, Figs 16-22.
1982. Palamarev, p. 25, Pl. 8, Figs 4-5.
1987. Palamarev & Petkova, p. 145, Pl. 38, Fig. 8.
Material: Ca.
Location and stratigraphical range: Drenovets, Krivodol (Krivodol Formation, Volhynian); Hairedin (Kri-

vodol Formation, Bessarabian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

SABAL Adans. – ARECACEAE

Sabal haeringiana Unger

1932. Konjarov, p. 98, Pl. 24, Fig. 4.
1937. Konstantinov, p. 260, Pl. 1, Figs 11-12.
Rev. 1992. *Trachycarpus rhapifolia* (Sternb.) Takht.; Palamarev & al., p. 3, Pl. 1, Figs 1-4.

Sabal lamanonis (Brongn.) Heer

1859. Heer, p. 86, Pl. 33, Pl. 34.
2001. Palamarev & al., p. 292, Pl. 3, Fig. 5.
1822. *Palmacites lamanonis* Brongn.; Brongniart, p. 210, Pl. 3, Fig. 1.
1964a. *Livistona latania* (Rossm.) Takht.; Palamarev, p. 34.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene); Choukourovo (Coal-bearing formation, Middle Miocene).
Collection: IB (BAS).

Sabal longirhachis (Unger) Palam., Petkova & Gogov

1992. Palamarev & al., p. 4, Pl. 2, Figs 1-2; Pl. 3, Figs 2-3.
1999b. Palamarev & al., p. 22, Pl. 8, Fig. 9; Pl. 10, Fig. 1.
1852. *Flabellaria longirhachis* Unger, p. 19, Pl. 8, Fig. 1; Pl. 9, Fig. 1.
Material: Li.
Location and stratigraphical range: Pchelarovo (Sandy argillaceous formation, Upper Eocene); Eleshnitsa (Koupen Formation, Upper Eocene – Lower Oligocene).
Collection: IB (BAS).
Note: According to Kvaček & Herman (2004), *F. longirhachis* belongs to morpho-genus *Sabalites*.

Sabal major (Unger) Heer

1855. Heer, p. 88, Pl. 35, Figs 1-2; Pl. 36, Figs 1-2.
1932. Konjarov, p. 54, p. 239, Pl. 70.
1964a. Palamarev, p. 33.
1988. Černjavska & al., p 31, Pl. 2, Fig. 6.
1992. Palamarev & al., p. 4, Pl. 1, Fig. 5.
2001. Palamarev & al., p. 292, Pl. 2, Fig. 1.
1937. *S. heringiana* Unger; Konstantinov, p. 260, Pl. 1, Fig. 11, 12.
1847. *Flabellaria major* Unger, p. 42, Pl. 14, Fig. 2.
Material: Li.
Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene); Strazha (Smolyan Formation, Upper Eocene–Lower Oligocene); Borino (Borino Formation, Lower Oligocene); Smolyan (Coalbearing formation, Lower Oligocene); Bobovdol, Pernik (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

SASA Makino & Shibata – POACEAE

Sasa kodorica Kolak.

1964. Kolakovsky, p. 32, Pl. 3, Figs 6-7a-b.
1987. Palamarev & Petkova, p. 155, Pl. 39, Figs 8-9.
Material: Li.
Location and stratigraphical range: Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

SCHEUCHZERIA L. – SCHEUCHZERIACEAE

Scheuchzeria rhenana (Weyland) Juchniewicz

1975. Juchniewicz, p. 94, Pl. 20, Figs 1-3.
1984. Uzunova, p. 74, Fig. 2.1-2.
1957. *Palmophyllum rhenanum* Weyland, p. 42.
1973. *Glumophyllum rhenanum* (Weyland) Weyland, Kilpper & Berendt; Palamarev & Uzunova, p. 816, Fig.-text 3.2a.
1954. *Palmae* Form "B" Kräusel & Weyland, p. 117, Pl. 21, Figs 1-2.
Material: Cu.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-Lower Dacian).
Collection: IB (BAS).

SCHOENOPLECTUS (Rchb.) Palla – CYPERACEAE

Schoenoplectus aff. *lacustris* (L.) Palla

1970. Palamarev, p. 59, Pl. 6, Figs 9-10.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

SCIRPUS L. – CYPERACEAE

Scirpus longispermus Dorof.

1963. Dorofeev, p. 121, Pl. 14, Figs 28-34.
1971. Palamarev, p. 160, Pl. 23, Figs 7-8.
1994a. Palamarev, p. 150, Pl. 5, Fig. 14.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Sofia basin – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Scirpus aff. _torreyi_ Olney

1970. Palamarev, p. 58, Pl. 6, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

SMILAX L. – SMILACACEAE

Smilax aspera L.

1929. Stojanoff & Stefanoff, p. 28, Pl. 5, Fig. 13.
Rev. 1987. *Smilax hastata* (Brongn.) Saporta; Palamarev & Petkova, p. 149, Pl. 36, Fig. 1.

1935. Stefanov & Jordanov, p. 28, Pl. 4, Figs 4-5; Fig.-text 27.
Rev. *Smilax hastata* (Brongn.) Saporta; Palamarev, hoc loco.

Smilax aspera L. foss.

1984. Kitanov, p. 66.
Rev. 1987. *Smilax hastata* (Brongn.) Saporta; Palamarev & Petkova, p. 149, Pl. 36, Fig. 1.

Smilax excelsa L. foss.

1984. Kitanov, p. 66, Fig. 15.
Material: Li.
Location and stratigraphical range: Gurmen (Baldevo Formation, Pontian).
Collection: IB (BAS).

Smilax excelsa L. foss.

1967. Petkova, p. 149, Pl. 8, Figs 8a-b; Pl. 13, Fig. 11.
Rev. 1987. *Smilax weberi* P. Wessel; Palamarev & Petkova, p. 148, Pl. 37, Figs 5a-b.

Smilax hastata (Brongn.) Saporta

1865. Saporta, p. 253, Pl. 12, Fig. 2.
1987. Palamarev & Petkova, p. 149, Pl. 36, Fig. 1.
1998. Palamarev & al., p. 15.
1929. *S. aspera* L.; Stojanoff & Stefanoff, p. 28, Pl. 5, Fig. 13.
1935. Stefanov & Jordanov, p. 28, Pl. 4, Fig. 4-5; Fig.-text 27.
1984. *S. aspera* L. foss.; Kitanov, p. 66.
1828. *Smilacites hastata* Brongn.; Brongniart, p. 45, Pl. 3, Fig. 8.
Material: Li.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Rouzhintsi (Krivodol Formation, Volhynian); Gurmen (Nevrokop Formation, Upper Pontian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Smilax weberi P. Wessel

1856. Wessel in Wessel & Weber, p. 127, Pl. 21, Fig. 1.
1987. Palamarev & Petkova, p. 148, Pl. 37, Figs 5a-b.
2000. Bozukov, p. 28, Pl. 5, Fig. 5.
1935. *Smilax* sp. aff. *S. excelsa* L.; Stefanov & Jordanov, p. 29, Pl. 6, Fig. 7; Fig.-text 28.
1967. *S. excelsa* L. foss.; Petkova, p. 149, Pl. 8, Figs 8a-b; Pl. 13, Fig. 11.
Material: Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene); Pelovo, Rouzhintsi, Stavertsi (Krivodol Formation, Volhynian); Sofia basin – Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

Smilax sp. aff. *S. excelsa* L.

1935. Stefanov & Jordanov, p. 29, Pl. 6, Fig. 7; Fig.-text 28.
Rev. 1987. *Smilax weberi* P. Wessel; Palamarev & Petkova, p. 148, Pl. 37, Figs 5a-b.

SPARGANIUM L. – SPARGANIACEAE

Sparganium camenzianum Kirchh.

1941. Kirchheimer, p. 226, Fig. 18.
1971. Palamarev, p. 161, Pl. 24, Figs 6-7.

1987. Palamarev & Petkova, p. 153, Pl. 39, Figs 5-6.
1994a. Palamarev, p. 150, Pl. 4, Fig. 7.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Gabare (Krivodol Formation, Volhynian); Hairedin (Krivodol Formation, Bessarabian); Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

Sparganium chomutovense Bůžek & Holý

1968. Palamarev, p. 207, Pl. 40, Fig. 32; Fig.-text 8.
Rev. 1987. *Caricoidea johnstrupii* (Hartz) Palam.; Palamarev in Palamarev & Petkova, p. 152, Pl. 38, Fig. 7; Pl. 39, Figs 3-4.

1971. Palamarev, p. 154, Pl. 23, Figs 18-19.
Rev. 1989. *Caricoidea jugata* (P. Nikitin) Mai; Palamarev, p. 54, Pl. 4, Fig. 6.

***Sparganium* cf. *elongatum* Dorof.**

1971. Palamarev, p. 161, Pl. 23, Figs 14-15.
1963. Dorofeev, p. 93, Pl. 6, Fig. 13.13.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene).
Collection: IB (BAS).

***Sparganium nanum* Dorof.**

1958. Dorofeev in Kolakovsky, p. 325, Pl. 7, Figs 2-5.
1987. Palamarev & Petkova, p. 153, Pl. 39, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Gabrovnitsa, Krivodol (Krivodol Formation, Volhynian); Slavotin (Krivodol Formation, Bessarabian).
Collection: IB (BAS).

Sparganium noduliferum C. & E. Reid

1970. Palamarev, p. 62, Pl. 6, Fig. 13.
Rev. 1994. *Sparganium* cf. *tanaiticum* Dorof.; Palamarev, p. 151, Pl. 5, Figs 11-12.

***Sparganium* aff. *ramosum* Huds.**

1970. Palamarev, p. 62, Pl. 6, Fig. 14.
Material: Ca.
Location and stratigraphical range: Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian).
Collection: IB (BAS).

***Sparganium tambovicum* Dorof.**

1979. Dorofeev, p. 72, Pl. 6, Figs 6-18; Figs-text 17.9-16.
1994a. Palamarev, p. 150, Pl. 5, Fig. 10.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Sparganium* cf. *tanaiticum* Dorof.**

1994a. Palamarev, p. 151, Pl. 5, Figs 11-12.
1979. Dorofeev, p. 67, Pl. 8, Figs 11-19; Figs-text 11.1-11.
1970. *S. noduliferum* C. & E. Reid; Palamarev, p. 62, Pl. 6, Fig. 13.
Material: Ca.
Location and stratigraphical range: Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Razlog (Razlog coalbearing formation, Lower Pontian–Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Sparganium valdense* Heer**

1855. Heer, p. 100, Pl. 45, Figs 6-8; Pl. 46, Figs 6-7.
2000. Bozukov, p. 29, Pl. 5, Figs 3-4.
Material: Ca, Li.
Location and stratigraphical range: Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

SPIREMATOSPERMUM Chandler – ZINGIBERACEAE

***Spirematospermum wetzleri* (Heer) Chandler**

1925. Chandler, p. 17, Pl. 1, Figs 8a-c; Fig.-text 5.
1982. Palamarev, p. 25, Pl. 8, Fig. 9.
1994a. Palamarev, p. 148, Pl. 5, Figs 7-8.
1998. Palamarev & al., p. 15.
1859. *Gardenia wetzleri* Heer, p. 182, Pl. 141, Figs 81-103.
Material: Ca.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian) – Kutina (Gnilyane Formation, Lower Pontian; Novi Iskur Formation, Upper Pontian-Lower Dacian); Melnik (Kalimanska Formation, Lower Pontian-

Lower Dacian); Ognyanovo (Baldevo Formation, Upper Pontian – Lower Dacian).
Collection: IB (BAS).

STRATIOTES L. – HYDROCHARITACEAE

***Stratiotes acutispermum* Palam.**
1994a. Palamarev, p. 147, Pl. 5, Figs 1-2.
Holotypus: Pl. 5, Fig. 1, Palamarev (1994a).
Material: Ca.
Location and stratigraphical range: Sofia basin – Kutina (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Stratiotes hantonensis* Chandler**
1960. Chandler, p. 205, Pl. 30, Figs 18-25.
1973. Palamarev, p. 93, Pl. 4, Figs 11-15; Pl. 5, Figs 1-13.
1979. Palamarev, p. 13, Pl. 4, Figs 5-6; Pl. 5, Figs 1-3; Fig.-text 5.
Material: Ca.
Location and stratigraphical range: Nikolaevo (Coalbearing formation, Priabonian); Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Stratiotes intermedius* (Hartz) Chandler**
1923. Chandler, p. 132, Pl. 5, Figs 18-19.
1979. Palamarev, p. 10, Pl. 1, Fig. 1.
1909. *S. aloides* f. *intermedius* Hartz, p. 126, Pl. 4, Figs 3-4
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

***Stratiotes kaltennordheimensis* (Zenker) Keilhack**
1896. Keilhack, p. 987.
1979. Palamarev, p. 11, Pl. 2, Figs 3-6.
1994a. Palamarev, p. 146, Pl. 5, Figs 5-6.
1970. *Stratiotes* cf. *kaltennordheimensis* (Zenker) Keilhack; Palamarev, p. 56, Pl. 5, Figs 10-13.
1833. *Folicullites kaltennordheimensis* Zenker, p. 177, Pl. 4, Figs A.3-7.
Material: Ca.
Location and stratigraphical range: Bobovdol (Coalbearing formation, Upper Oligocene); Dospei (Bituminous schist formation, Upper Oligocene); Bistritsa (Coalbearing formation, Middle Miocene); West Maritsa basin – Merichleri (Upper Maritsa Formation, Maeotian); East Maritsa basin – Troyanovo (Maritsa coalbearing formation, Lower Pontian-Upper Dacian); Bankya (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Kutina (Novi Iskur Formation, Upper Pontian-Lower Dacian).
Collection: IB (BAS).

***Stratiotes minutissimus* Chandler**
1963. Chandler, p. 63, Pl. 7, Figs 29-37.
1973. Palamarev, p. 94, Pl. 5, Figs 14-18.
Material: Ca.
Location and stratigraphical range: Roudnik (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Stratiotes neglectus* Chandler**
1923. Chandler, p. 126, Pl. 5, Fig. 4, 27; Pl. 6, Fig. 24.
1973. Palamarev, p. 96, Pl. 6, Figs 1-4.
1979. Palamarev, p. 17, Pl. 3, Figs 5-6; Pl. 4, Figs 1-2.
Material: Ca.
Location and stratigraphical range: Roudnik, Nikolaevo, Planinitsa (Coalbearing formation, Priabonian); Bulgarevo (Coalbearing formation, Upper Eocene-Lower Oligocene); Bobovdol, Zhedna (Coalbearing formation, Upper Oligocene).
Collection: IB (BAS).

***Stratiotes suborbiculatus* Palam.**
1979. Palamarev, p. 17, Pl. 6, Figs 4-5; Pl. 7, Figs 1-2; Fig.-text 6.
Holotypus: Pl. 7, Figs 1-2, Palamarev (1979).
Material: Ca.
Location and stratigraphical range: Roudnik, Nikolaevo (Coalbearing formation, Priabonian).
Collection: IB (BAS).

***Stratiotes thalictroides* (Brongn.) Chandler**
1923. Chandler, p. 129, Pl. 5, Figs 13-14; Pl. 6, Figs 6-8.
1970. Palamarev, p. 56, Pl. 5, Figs 4-6; Pl. 7, Fig. 3.
1979. Palamarev, p. 12, Pl. 4, Figs 3-4.
1822. *Carpolites thalictroides* Brongn; Brongniart, p. 117.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian).
Collection: IB (BAS).

***Stratiotes tuberculatus* E. Reid**

1920. Reid, p. 51, Pl. 3, Figs 6-7.
1970. Palamarev, p. 55, Pl. 5, Figs 7-9; Pl. 7, Fig. 4.
1979. Palamarev, p. 10, Pl. 1, Figs 2-6; Pl. 2, Figs 1-2; Fig.-text 4.
1994a. Palamarev, p. 147, Pl. 5, Figs 3-4.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); West Maritsa basin – Merichleri (Upper Maritsa Formation, Middle Miocene – Maeotian); Sofia basin – Kutina (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Balsha, Hrabursko (Gnilyane Formation, Lower Pontian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Melnik, Marino Pole (Kalimanska Formation, Lower Pontian-Lower Dacian); East Maritsa basin – Troyanovo (Maritsa coalbearing formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

***Stratiotes websteri* (Brongn.) Chandler**

1957. Chandler, p. 86, Pl. 11, Figs 15-19.
1979. Palamarev, p. 12, Pl. 3, Figs 1-4.
1998. Palamarev & al., p. 19.
1822. *Carpolithes thalictroides* var. *websteri* Brongn.; Brongniart, p. 319, Pl. 14, Fig. 6.
1849. C. *websteri* (Brongn.) Brongn.; Brongniart, p. 127.
Material: Ca.
Location and stratigraphical range: Bobovdol, Kopanitsa (Coalbearing formation, Upper Oligocene); Zhedna (Bituminous formation, Lower Oligocene).
Collection: IB (BAS).

***TRACHYCARPUS* Wendl. – ARECACEAE**

***Trachycarpus rhapifolia* (Sternb.) Takht.**

1958. Takhtajan, p. 1670, Pl. 4, Figs 1-5.
1964a. Palamarev, p. 33, Pl. 14, Figs 2-3.
1966. Palamarev & Petkova, p. 56.
1992. Palamarev & al., p. 3, Pl. 1, Figs 1-4.
1995. Palamarev & Staneva, p. 119.
1998. Palamarev & al., pp. 14-15.
1922. *Flabellaria rhapifolia* Sternb.; Sternberg, p. 32, Pl. 21, Fig. 1
1932. *Sabal haeringiana* Unger; Konjarov, p. 98, Pl. 24, Fig. 4.
1937. Konstantinov, p. 260, Pl. 1, Figs 11-12.
Material: Li.
Location and stratigraphical range: Polkovnik Serafimovo (Serafimovo Formation, Upper Eocene-Lower Oligocene); Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene); Debar (Sandy argillaceous formation, Priabonian-Lower Oligocene); Pustrogor (Pustrogor Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing Formation, Middle Miocene).
Collection: IB (BAS).

***TYPHA* L. – TYPHACEAE**

***Typha angustifolia* L. foss.**

1934. Stefanov & Jordanov, p. 8, Pl. 2, Fig. 2.
1956. Kitanov & Nikolova, p. 110, Pl. 9, Fig. 1; Fig.-text 21.
1960. Kitanov, p. 374.
1967. Petkova, p. 159, Pl. 13, Figs 6-6a.
1982. Kitanov, p. 37, Pl. 1.
1984. Kitanov, p. 67.
1987. Kitanov, p. 397.
1990. Kitanov, p. 90, Fig. 2.1.
1935. *T. angustifolia* var. *angustata* (Borry & Chaub.) Jordanov; Stefanov & Jordanov, p. 26, Pl. 5, Figs 4-5; Fig.-text 24.
Material: Li.
Location and stratigraphical range: Pelovo, Stavertsi (Krivodol Formation, Volhynian)**;** Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Zemlyane (Lozenets Formation, Romanian); East Maritsa basin (Upper Maritsa coalbearing formation, Pontian-Dacian).
Collection: IB (BAS).

Typha latifolia foss. auct. non L.

1934. Stefanov & Jordanov, p. 8, Pl. 2, Fig. 1; Pl. 4, Fig. 18.
1935. Stefanov & Jordanov, p. 27, Pl. 5, Figs 6-8; Fig.-text 25.
1940. Kitanov, p. 6, Pl. 1, Fig. 2.
1956. Kitanov & Nikolova, p. 110, Pl. 9, Fig. 2; Fig.-text 20.
1982. Kitanov, p. 37, Pl. 1.
1984. Kitanov, p. 67.
1987. Kitanov, p. 397.
Rev. 1988. *Typha latissima* A. Braun; Palamarev & Kitanov, p. 197, Pl. 12, Fig. 3.

1990. Kitanov, p. 90, Fig.-text 2.4.
Rev. *Typha latissima* A. Braun; Palamarev, hoc loco.

Typha latissima A. Braun ex Heer

1855. Heer, p. 98, Pl. 63-64.
1851. Braun in Stizenberger, p. 75 (nomen).
1961. Palamarev, p. 178, Fig.-text 3.
1964a. Palamarev, p. 32, Pl. 13, Fig. 2.
1988. Palamarev & Kitanov, p. 197, Pl. 12, Fig. 3.
1998. Palamarev & al., p. 15.
2000. Bozukov, p. 29, Pl. 5, Figs 2, 6.
2001. Palamarev & al., p. 292.
1934. *T. latifolia* auct. non L.; Stefanov & Jordanov, p. 8, Pl. 2, Fig. 1; Pl. 4, Fig. 18.
1935. Stefanov & Jordanov, p. 27, Pl. 5, Fig. 6-8; Fig.-text 25.
1940. Kitanov, p. 6, Pl. 1, Fig. 2.
1956. Kitanov & Nikolova, p. 110, Pl. 9, Fig. 2; Fig.-text 20.
1982. Kitanov, p. 37, Pl. 1.
1984. Kitanov, p. 67.
1987. Kitanov, p. 397.
1990. Kitanov, p. 90, Fig.-text 2.4.
Material: Li.
Location and stratigraphical range: Borino (Borino Formation, Lower Oligocene); Bobovdol (Coalbearing formation, Upper Oligocene); Choukourovo (Coalbearing Formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Garmen (Nevrokop Formation, Upper Pontian); Belobrezhki basin – Gaber (Novi Iskur Formation, Upper Pontian-Lower Dacian); Sofia basin – Novi Iskur, Podgoumer (Novi Iskur Formation, Upper Pontian-Lower Dacian) – Lozenets (Lozenets Formation, Romanian).
Collection: IB (BAS).

Typha elliptica Negru

1972. Negru, p. 68, Pl. 6, Figs 3-7; Fig.-text 7.
1989. Palamarev, p. 55, Pl. 4, Fig. 9.
1997. Mai & Palamarev, p. 494, Pl. 4, Figs 5-6.
Material: Ca.
Location and stratigraphical range: Choukourovo (Coalbearing formation, Middle Miocene); Melnik (Kalimantsi Formation, Lower Pontian-Lower Dacian); Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

VALLISNERIA Michx. – HYDROCHARITACEAE

Vallisneria ovalis Mai

1978. Mai in Mai & Walther, p. 134, Pl. 48, Figs 7-11.
1994. Palamarev, p. 147, Pl. 5, Fig. 9.
Material: Ca.
Location and stratigraphical range: Sofia basin – Balsha (Gnilyane Formation, Lower Pontian).
Collection: IB (BAS).

INCERTAE SEDIS

Carpolithes cf. *hamsteadensis* Collinson

1983. Collinson, p. 217, Fig.-text 21.
2001. Uzunova, p. 8, Pl. 8, Fig. 7.
Material: Ca.
Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).
Collection: IB (BAS).

Carpolithus phytocrenoides Dorof.

1963. Dorofeev, p. 280, Pl. 50, Figs 15-16.
1970. Palamarev, p. 63, Pl. 7, Figs 5-7.
Material: Ca.
Location and stratigraphical range: Nikolichevtsi (Nikolichevtsi Formation, Maeotian); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian).
Collection: IB (BAS).

Dicotyledonicutis glandulosa Juchniewicz

1975. Juchniewicz, p. 125, Pl. 19, Figs 1-3.
1996. Uzunova, p. 33, Pl. 8, Figs 1-2
Material: Cu.
Location and stratigraphical range: Karbintsi, Rouzhintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Macclintockia basinervis (Rossm.) Knobloch

1962. Knobloch, p. 121, Pl. 3, Fig. 5.
1996. Bozukov, p. 68, Pl. 1, Figs 1-5.
2000. Bozukov, p. 28, Pl. 3, Fig. 1.
1988. *Cocculus (Macclintockia) kanii* (Heer) Saporta & Marion; Černjavska & al., p. 30, Pl. 1, Fig. 3.
1840. *Phyllites basinervis* Rossm.; Rossmässler, p. 37, Pl. 9, Figs 41-42.
Material: Li.

Location and stratigraphical range: Hvoina (Pavelsko argillaceous sandstone Formation, Upper Eocene-Lower Oligocene); Satovcha (Sivik Formation, Middle Miocene).
Collection: IB (BAS).

Rhamnospermum bilobatum Chandler

1925. Chandler, p. 30, Pl. 5, Figs 1a-c.
1973. Palamarev, p. 99, Pl. 7, Figs 4-6.
Material: Ca.
Location and stratigraphical range: Roudnik (Coal-bearing formation, Priabonian).
Collection: IB (BAS).

Wackersdorfia dubia Peters

1963. Peters, p. 2, Pl. 1, Fig. 2; Pl. 2, Figs 7-14; Pl. 3, Figs 15-20.
1996. Uzunova, p. 34, Pl. 9, Fig. 2.
Material: Cu.
Location and stratigraphical range: Karbintsi (Krivodol Formation, Volhynian).
Collection: IB (BAS).

Plate I

Figs 1-7. Photographs of type fossil specimens:

1. *Pinus palaeorhodopaensis* (×1); **2.** *Gleichenia rhodopaea* (×1); **3.** *Lithocarpus palaeorhodopensis* (×1); **4.** *Abies garmensis* (×2); **5.** *Persea protobalcanica* (×1); **6.** *Dodonaea salicoides* var. *multinervis* (×1); **7.** *Adinandra palaeorhodopaea* (×1).

Plate II

Figs 1-6. Photographs of type fossil specimens:

1. *Alnus palaeorhodopaea* (×1); **2.** *Cercidiphyllum macrophyllum* (×1); **3.** *Carpinus mestensis* (×2); **4.** *Cyclobalanopsis stojanovii* (×1); **5-6.** *Lithocarpus palaeobalcanica* (×1).

Plate III

Figs. 1-6. Photographs of type fossil specimens:

1. *Gordonia stefanovii* (×0.75); **2.** *G. stefanovii* (×1); **3.** *Bauhinia bulgarica* (×1); **4.** *Myrtus palaeomestensis* (×2); **5.** *Caesalpinites inaequalis* (×1); **6.** *Acer protohyrcanum* (×0.75).

Plate IV

Figs 1-7. Photographs of type fossil specimens:

1. *Prunus attenuatifolia* (×1); **2.** *Hartia palaeorhodopensis* (×1)); **3.** *Daphnogene rhodopaea* (×2); **4.** *Matudaea palaeobalcanica* (×1); **5.** *Quercus bulgarica* (×2); **6.** *Kadsura singularis* (×1); **7.** *Ocotea oblanceolata* (×1).

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Bozukov, V. 2000. Miocene macroflora of the Satovcha Graben (Western Rhodopes). I. Systematics. 5. *Magnoliophyta*: *Araliaceae*, *Aquifoliaceae*, *Celastraceae*, *Rhamnaceae*, *Vitaceae*, *Apocynaceae*, *Caprifoliaceae*, *Convolvulaceae*, *Macclintockia*; *Smilacaceae*, *Cyperaceae*, *Sparganiaceae*, *Typhaceae*. – Phytol. Balcan., **6**(1): 15-29.

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