

Catalogue of the Cenozoic plants of Bulgaria (Eocene to Pliocene). Addendum and Corrigendum

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Abstract. After publication of the *Catalogue of the Cenozoic plants of Bulgaria*, researches into the fossil flora have continued unfailingly. Consequently, 24 new taxa have been registered for Bulgaria and over 20 of the so far known ones have been revised. Four new local paleofloras were studied and three old collections were supplemented with new fossil material. New data have been obtained on the geographical and stratigraphical distribution of the already established taxa. Furthermore, three overlooked publications were found, the data from which were not included in the catalogue, as well as some inaccuracies and omissions in the text. All this served as a precondition to systematize the new data and the revisions and corrections made to the Catalogue.

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

Introduction

The here presented Addendum and Corrigendum to the *Catalogue of the Cenozoic plants of Bulgaria (Eocene to Pliocene)* (Palamarev & al. 2005) comprises information from the paleobotanical studies carried out in Bulgaria during the publication of the catalogue and after it. Its daily use as a valuable source of paleobotanical information has inevitably disclosed some omissions and inaccuracies in the text, which we have striven to remedy here.

The new locations studied during the publication of the catalogue or after that are Varshets (Palamarev 2004), Golyam Manastir (Palamarev & Bozukov 2004), and Valche Pole and Zlatoustovo (Bozukov & al. 2008). Data from these studies, as well as from the studies of the additional materials from the already known locations near Dospei (Bozukov & al. 2009), Gaber (Bozukov & al. 2011),

and Ognyanovo (Palamarev & Tsenov 2004; Tsenov 2010) are presented here.

Three overlooked studies by Hadžiev (1962), Hadžiev & Mädler (1962), Uzunova & Ivanov (1996) were found out and data from them, as well as the revisions made by Bozukov (2008, 2011) and Bozukov & al. (2012) are also included here.

Plate 1 features some author's photographs of type samples omitted in the catalogue. The photographs are of *Stewartia stefanovii* Palam. & Bozukov (Pl. I, Fig. 1); *Symplocos brežanii* Palam. (Pl. I, Fig. 2); *Hydrangea palaeopirinica* Palam. (Pl. I, Fig. 3); *Eostanergia ružinciana* (Palam. & al.) Palam. & Uzunova (Pl. I, Figs 4-5); *Crataegus integrifolia* Palam. (Pl. I, Fig. 6); *Celastrorhynchium mirabile* Palam. & Petkova (Pl. I, Fig. 7); and *Platycarya palaeostrobilaceae* Palam. (Pl. I, Fig. 8).

The Addendum and Corrigendum to 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 alphabetical order;
 - each added new registered species is supplied with a citation block which includes citation of the accepted name, basionym, the more important synonyms in terms of nomenclature, and all Bulgarian sources in which it has been described or recorded;
 - under the heading **Material**, the type of the fossil organ is given used to determine the species: 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; Wo = wood. 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 IBER (BAS) stands for the Institute of Biodiversity and Ecosystem Research, Department of Plant and Fungal Diversity and Resources, Palaeobotany and Palynology Division, Bulgarian Academy of Sciences. Whenever the authors have not pointed out in which collection the fossil samples are stored, they are marked as “unknown”;
 - each added new registered species is listed by the name of its 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. *Glossary of the Officially Accepted Lithostratigraphic units in Bulgaria (1882-1992)* (Tenčov 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 of photographic illustration of the originals. The results of the revision are featured under the heading **Rev.** by the names of the corresponding authors;
 - an insignificant number 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 are listed only in “*italic*” and the correct names in “**bold**” and “*italic*”;
 - 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 Addendum and Corrigendum are transliterated into English according to the adopted Transliteration Act (2009);
 - the names of all registered species are written in Latin, according to the rules, while in the citation blocks they are given according to the literary source.
 - whenever a text to a species already published in the Catalogue has to be only supplemented or corrected, only the new or corrected data are written under the name of the species.
 - whenever a text in the Catalogue has proved unnecessary, it is supplied with a note that it should be omitted.
- V. Bozukov
- The listing of the authors’ team reflects participation in the compilation of the Addendum and Corrigendum of the catalogue.
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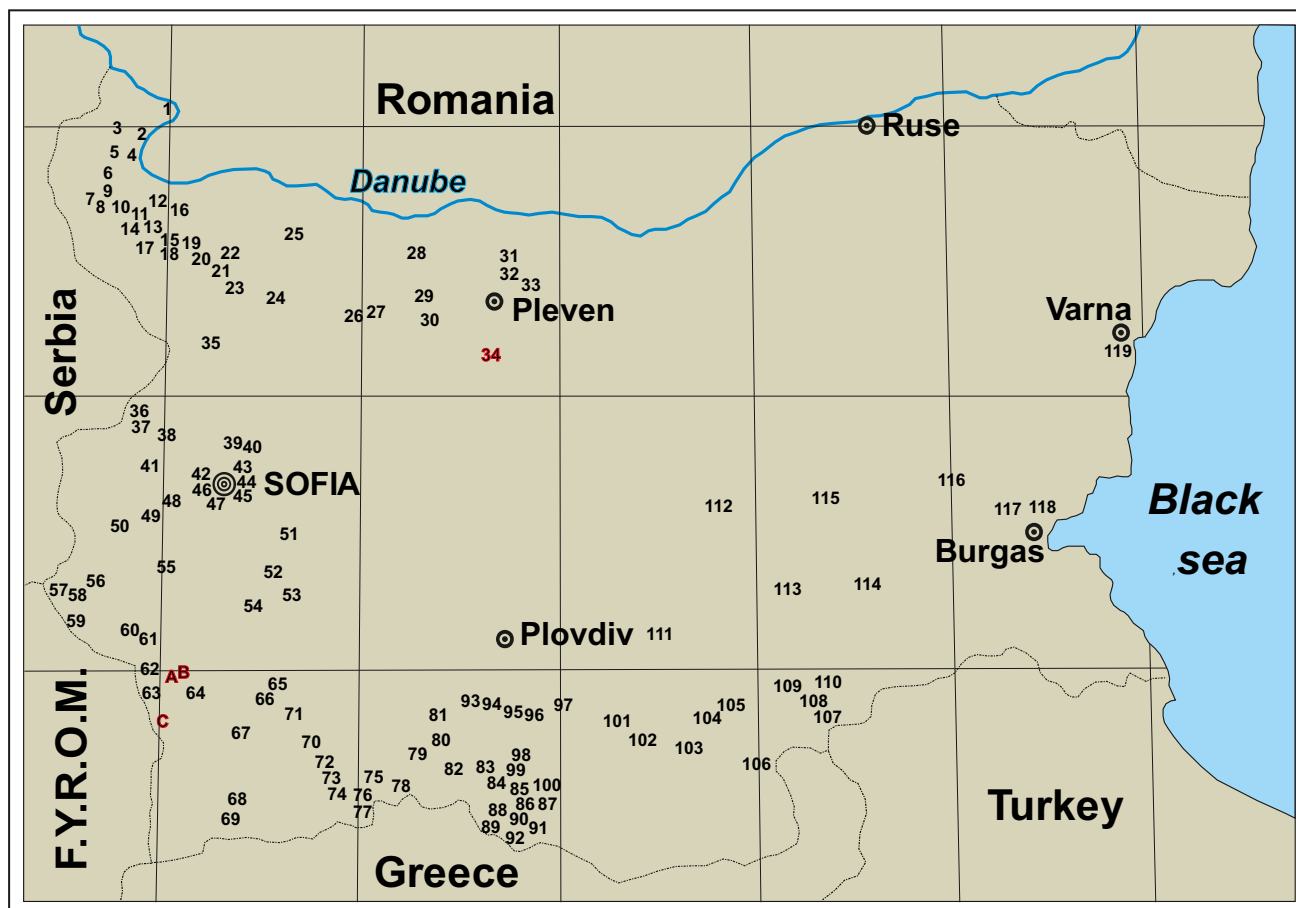
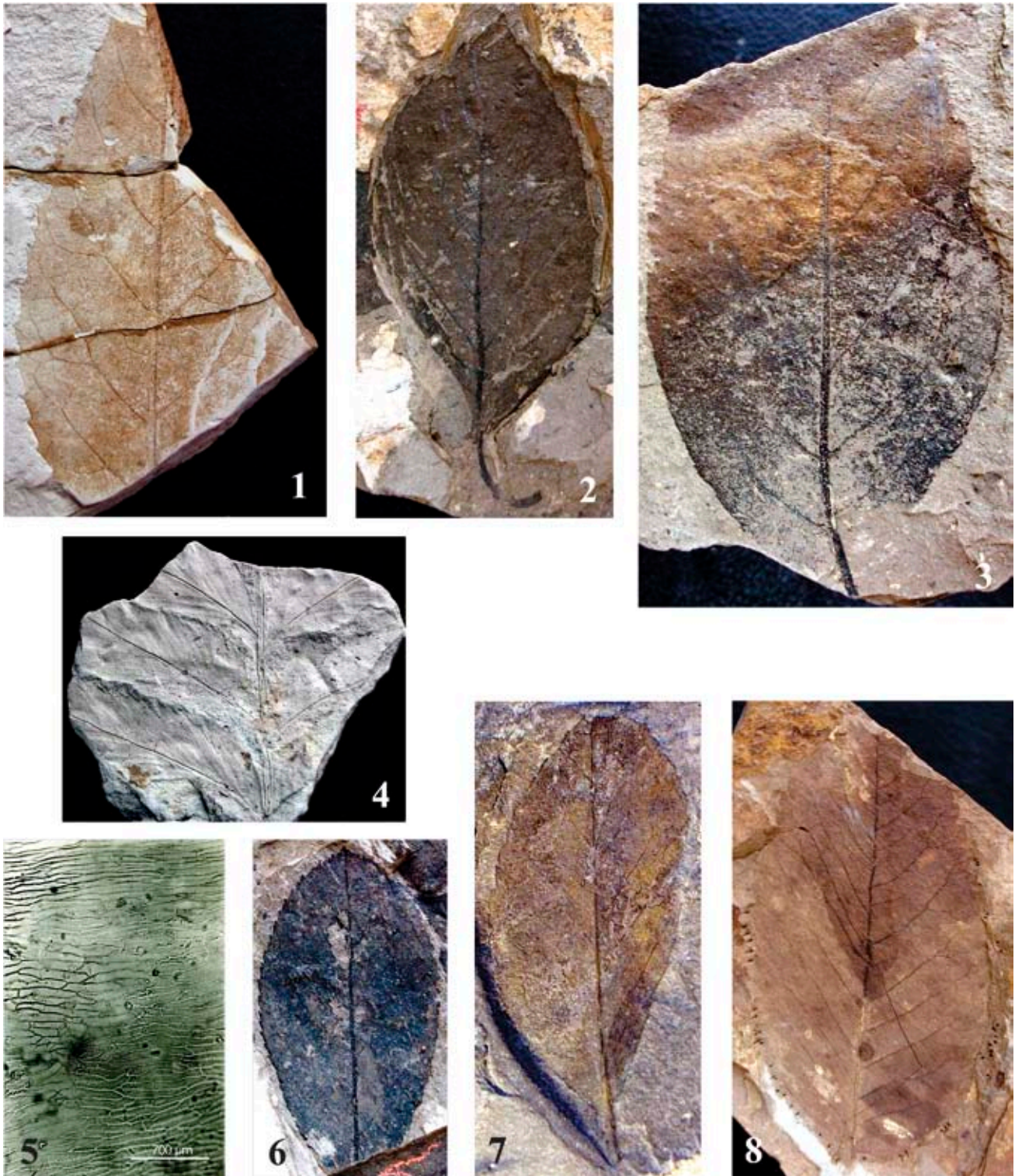


Figure 1. Localities of Cenozoic floras in Bulgaria

1, Koshava; 2, Vidin; 3, Bela Rada; 4, Sinagovtzi; 5, Milchina Laka; 6, Gramada; 7, Shishmanovo; 8, Tolovitsa; 9, Makresh; 10, Kladorub-Ostrokaptzi; 11, Dalgo Pole; 12, Vodnyantsi; 13, Karbintzi; 14, Medovnitsa; 15, Belo Pole; 16, Drenovets; 17, Ruzhintsi; 18, Chernopole; 19, Smirnenski; 20, Slavotin; 21, Studeno Buche; 22, Gabrovnitsa; 23, Montana; 24, Krivodol; 25, Hairedin; 26, Gabare; 27, Lepitsa; 28, Stavertsi; 29, Pelovo; 30, Telish; 31, Brushlyanitsa; 32, Koilovtzi; 33, Slavyanovo; 35, Varshets; 36, Hrabursko; 37, Gaber; 38, Balsha; 39, Novi Iskar; 40, Katina; 41, Slakovtzi; 42, Bankya; 43, Podgumer; 44, Operata; 45, Lozenets; 46, Zemlyane; 47, Bistritsa; 48, Pernik; 49, Kopanitsa; 50, Zhedna; 51, Chukurovo; 52, Samokov; 53, Borovets; 54, Dospei; 55, Bobovdol; 56, Nikolichevtzi; 57, Bukovska 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, Bukovo; 71, Eleshnitsa; 72, Baldevo; 73, Ognyanovo; 74, Garmen; 75, Satovcha; 76, Valkosel; 77, Slashten; 78, Barutin; 79, Borino-Teshel; 80, Devin; 81, Selcha; 82, Mugla; 83, Stikul; 84, Smolyan; 85, Ravnishta; 86, Dolno Fatovo; 87, Polkovnik Serafimovo; 88, Gadevitsa; 89, Gozdyuvska Mahala; 90, Laga; 91, Palovska Cheshma; 92, Plovdivtzi; 93, Orehovo; 94, Hvoina; 95, Pavelsko; 96, Braikovitsa; 97, Oreshets; 98, Momchilovci; 99, Levochevo-Pisanitsa; 100, Ustovo-Strazha; 101, Angel Voivoda; 102, Pchelarovo; 103, Perperek; 104, Gorno Voivodino; 105, Tsareva Polyana; 106, Valche Pole; 107, Raikova Mogila; 108, Pastrogor; 109, Georgi Dobrevo; 110, Levka; 111, Merichleri; 112, Nikolaevo; 113, Troyanovo; 114, Golyam Manastir; 115, Hadzhi Dimitar; 116, Planinitsa; 117, Balgarovo; 118, Rudnik; 119, Obrochishte.

Omitted localities: A, Leshko; B, Padesh; C, Suhostrel. Locality 34, Kalenik, must be omitted.

Plate I.



Figs 1-8. Photographs of fossil species types:

1. *Stewartia stefanovii*, Sat-1538B (×1); **2.** *Symplocos brežanii*, B-61 (×1); **3.** *Hydrangea palaeopirinica*, B-107 (×1); **4.** *Eostangeria ružinciana*, R-3518 (×1); **5.** *E. ružinciana*, adaxial cuticle; **6.** *Crataegus integrifolia*, B-62 (×1); **7.** *Celastrophyllum mirabile*, Br-221 (×1); **8.** *Platycarya palaeostrobilaceae*, B-4192 (×1).

POLYPODIOPHYTA

BOTRYCHIUM Sw. – OPHIOGLOSSACEAE

***Botrychium* aff. *underwoodianum* Maxon**

2010. Bozukov, V., Tsenov, B. & Vatshev, M., p. 889, Pl. 1, Figs 2-6.

Material: Li.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene – Lower Miocene).

Collection: IBER (BAS).

DAVALLIA Sm. – DAVALLIACEAE

***Davallia* sp.**

2008. Bozukov, p. 5.

1932. *Trichomanes* sp.; Stefanov & Jordanov, p. 88, Figs-text 1-3.

1935. Stefanov & Jordanov, p. 7.

Material: Li, Spores.

Location and stratigraphical range: Sofia Basin – Podgumer (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: Unknown.

OSMUNDA L. – OSMUNDACEAE

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

1932. *Pteris parschlugiana* Unger, Konjaroff, p. 54, Pl. 13, Figs 2-4; p.171, Pl. 57, Fig. 2; p. 244, Pl. 73, Fig. 1.

1932. *Pteris* sp., Konjaroff, p. 222, Pl. 64, Fig. 1.

Location and stratigraphical range: West Maritsa basin – Merichleri (Merichleri Limestone Formation, Oligocene).

PTERIS L. – PTERIDACEAE

***Pteris parschlugiana* Unger**

1932. Konjarov, p. 54, Pl. 13, Figs 2-4, p.171, Pl. 57, Fig. 2; p. 244, Pl. 73, Fig. 1.

***Pteris* sp.**

1932. Konjaroff, p. 54, Pl. 13, Figs 5-6; p. 171, Pl. 57, Fig. 1.

Material: Li.

Location and stratigraphical range: Pernik (coal-bearing formation, Upper Oligocene); Chukurovo (coal-bearing formation, Middle Miocene).

Collection: Unknown

***Pteris* sp.**

1932. Konjaroff, p. 222, Pl. 64, Fig. 1.

Rev.: *Osmunda parschlugiana* (Unger) Andr.; Bozukov, hoc loco.

TRICHOMANES L. – HYMENOPHYLLACEAE

***Trichomanes* sp.**

1932. Stefanov & Jordanov, p. 88, Figs-text 1-3.

1935. Stefanov & Jordanov, p. 7.

Rev.: 2008. *Davallia* sp.; Bozukov, p. 5.

PINOPHYTA

GINKGO L. – GINKGOACEAE

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

1963. *G. biloba* L. foss.; Jordanoff & Kitanov, p. 27, Pl. 3, Fig. 1; Figs-text 1a-b, 2.

Material: Cu.

***Ginkgo biloba* L. foss.**

1963. Jordanov & Kitanov, p. 27, Pl. 3, Fig. 1; Figs-text 1a-b, 2.

CUPRESSINOXYLON (Goepp.) Gothan – CUPRESSACEAE

***Cupressinoxylon polonicum* Kräusel**

1949. Kräusel, p. 174.

1962. Hadžiev, p. 143, Pl. 6, Figs 1-4.

1938. *Cupressinoxylon* sp. Kostyniuk, p. 15, Pl. 3, Figs 3-4; Fig.-text 4b.

Material: Wo.

Location and stratigraphical range: Sofia Basin – Gnilyane, Katina (Gnilyane Formation, Lower Pontian).

Collection: Unknown.

GLYPTOSTROBOXYLON Conwentz – TAXODIACEAE

***Glyptostroboxylon tenerum* (Kraus) Conwentz**

1884. Conwentz, p. 447.

1962. Hadžiev, p. 142, Pl. 5, Figs 1-4.

1864. *Glyptostrobos tener* Kraus, p. 194.

Material: Wo.

Location and stratigraphical range: Sofia Basin – Gnilyane, Katina (Gnilyane Formation, Lower Pontian).

Collection: Unknown.

GLYPTOSTROBUS Endl. – TAXODIACEAE

***Glyptostrobos europaea* (Brongn.) Unger**

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene – Lower Miocene).

JUNIPERUS L. – CUPRESSACEAE

***Juniperus aff communis* L.**

2011. Bozukov & al., p. 6, Pl. 1, Fig. 2.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

KETELEERIA Carr. – PINACEAE

***Keteleeria* sp.**

1964. Mai, p. 13, Fig. 12-15; Fig.-text 2a.

1996. Uzunova & Ivanov, p. 25, Pl. 1, Fig. 1; Pl. 2, Fig. 1.

Material: Cu.

Location and stratigraphical range: NW Bulgaria (Krivodol Formation, Volhynian – Bessarabian).

Collection: IBER (BAS).

LIBOCDRITES Endl. – CUPRESSACEAE

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

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene- Lower Miocene).

PICEA A. Dietr. – PINACEAE

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

1929. Stojanoff & Stefanoff, p. 12, Pl. 1, Figs 7-11; Fig.-text 2, Figs 1-6.

PINUS L. – PINACEAE

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

The following text must be omitted: 1929. Stojanoff & Stefanoff, p. 12, Figs 1-6; Pl. 1, Figs 7-11; Fig.-text 2.

***Pinus hepios* Unger**

2009. Bozukov & al., p. 272, Pl. 1, Fig. 1.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene – Lower Miocene).

***Pinus laricioides* Menzel**

2011. Bozukov & al., p. 5, Pl. 1, Fig. 1.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

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

2009. Bozukov & al., p. 272, Pl. 1, Fig. 2.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene – Lower Miocene).

SEQUOIA Endl. – TAXODIACEAE

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

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene);

***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, Fig. 7; non p. 228, Pl. 69, Fig. 4 = *Doliosstrobos taxiformis*.

TAXODIOXYLON Hartig. – TAXODIACEAE

***Taxodioxyton sequoianum* Gothan [= *T. gypsaceum* (Göppert) Kräusel]**

1906. Gothan, p.165, Fig.-text 2.

1962. Hadžiev, p. 138, Pl. 2, Figs 1-4.

Material: Wo.

Location and stratigraphical range: Sofia Basin – Gnilyane, Katina (Gnilyane Formation, Lower Pontian).

Collection: Unknown.

***Taxodioxyton taxodii* Gothan**

1906. Gothan, p.164, Figs-text 1, 4.

1962. Hadžiev, p. 141, Pl. 4, Figs 1-4.

Material: Wo.

Location and stratigraphical range: Sofia Basin – Gnilyane, Katina (Gnilyane Formation, Lower Pontian).

Collection: Unknown.

TAXODIUM Rich.- TAXODIACEAE

Taxodium dubium (Sternb.) Heer

1932. *T. distihum* (L.) Rich. *miocenicum* Heer; Konjarov, p. 54, Pl. 14, Figs 4-5; p. 128, Pl. 38, Fig. 4.

MAGNOLIOPHYTA

MAGNOLIOPSIDA

ACER L. – ACERACEAE

Acer angustilobum Heer

1932. Konjarov, p. 228, Pl. 69, Fig. 1.

1998. Palamarev & al., p. 14.

Rev.: *A. dasycarpoides* Heer f. *angustilobum* (Heer) Proch. & Bůžek; Bozukov, hoc loco.

Acer campestre L. foss.

1956. Kitanov & Nikolova, p. 107, Fig.-text 18.

Rev.: *Acer subcampestre* Göpp.; Bozukov, hoc loco.

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

1932. *Acer* aff. *angustilobum* Heer, Konjarov, p. 228, Pl. 69, Fig. 1.

1998. *Acer angustilobum* Heer; Palamarev & al., p. 14.

Location and stratigraphical range: Tsareva Polyana (Continental Formation, Lower Eocene).

Acer hyrcanum Fisch. & C.A. Mey.

1932. Konjaroff, p. 166, Pl. 56, Fig. 4.

Rev.: *Acer pseudomonspessulanum* Unger s. l.; Bozukov, hoc loco.

Acer monspessulanum L. foss.

1982. Kitanov, p. 37.

Rev.: *Acer pseudomonspessulanum* Unger s. l.; Bozukov, hoc loco.

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

1932. *A. hyrcanum* Fisch. & C.A. Mey, Konjaroff, p. 166, Pl. 56, Fig. 4.

1982. *A. monspessulanum* L. foss.; Kitanov, p. 37.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

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

1982. Kitanov, p. 37.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

***Acer subcampestre* Göpp.**

2004. Palamarev & Bozukov, p. 136, Pl. 5, Fig. 1.

2011. Bozukov & al., p. 9, Pl. 3, Fig. 1.

1956. *A. campestre* L. foss.; Kitanov & Nikolova, p. 107, Fig.-text 18.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian); Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian); Sofia Basin – Lozenets, Zemlyane (Lozenets Formation, Romanian).

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

1935. Stefanov & Jordanov, p. 62, Pl. 21, Figs 3-4; Fig.-text 60.

Material: Ca.

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

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; p. 244, Pl. 73, Figs 2-3; Pl. 74, Fig. 1.

Location and stratigraphical range: West Maritsa basin – Merichleri (Merichleri Limestone Formation, Oligocene); Borovets (coal-bearing formation, Upper Oligocene); Baldevo (Baldevo Formation, Lower Pontian – Lower Dacian); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

ACTINODAPHNE Nees – LAURACEAE

***Actinodaphne* cf. *dolichophylla* Takht.**

1963. Takhtajan, p. 201, Pl. 5, Fig. 7.

2004. Palamarev & Bozukov, p. 133, Pl. 1, Fig. 5.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

ALNUS B. Ehrh. – BETULACEAE

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

2009. Bozukov & al., p. 273, Pl. 2, Fig. 6.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

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

2004. Palamarev & Bozukov, p. 134, Pl. 6, Fig. 1.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

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

1932. Konjarov, p. 54, Pl. 19, Fig. 4-5; p. 125, Pl. 31, Figs 2-5; p. 129, Pl. 39, Figs 8-9.

Alnus kefersteinii (Göpp.) Unger

1932. Konjaroff, p. 54, Pl. 19, Fig. 3.

1961. Palamarev, p. 180, Pl. 3, Fig. 1.

Rev.: *A. suborientalis* Czezzott & Skirg.; Bozukov, hoc loco.

A. nostratum Unger

1932. Konjarov, p. 54, pars Pl. 19, Fig. 6.

Rev.: 2005. *A. suborientalis* Czezzott & Skirg.; Palamarev & al., p. 245.

***Alnus rotundata* Göppert**

1855. Göppert, p. 12, Pl. 4, Fig. 4.

2004. Palamarev & Bozukov, p. 134, Pl. 6, Fig. 1.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

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

2009. Bozukov & al., p. 273, Pl. 2, Fig. 5.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

***Alnus suborientalis* Czezzott & Skirg.**

2009. Bozukov & al., p. 274, Pl. 2, Fig. 7.

Pars 1932. *A. kefersteinii* Goepfert; Konjaroff, p. 54, Pl. 19, Fig. 3.

1932. *A. nostratum* Unger; Konjarov, p. 54, pars Pl. 19, Fig. 6.

1932. *Betula attenuata* Göpp.; Konjarov, p. 54, Pl. 19, Fig. 7.

1961. *Alnus kefersteinii* Göpp.; Palamarev, p. 180, Pl. 3, Fig. 1.

Location and stratigraphical range: Borovets, Pernik (coal-bearing formation, Upper Oligocene); Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

ALSTONIA R. Br. – APOCYNACEAE

***Alstonia eocaenica* Engelh.**

1922. Engelhardt, p. 67, Pl. 20, Fig. 9.

1998. Palamarev & al., p. 15.

Material: Li.

Location and stratigraphical range: Bobovdol (coal-bearing formation, Upper Oligocene).

Collection: IBER (BAS).

ANDROMEDA L. – ERICACEAE

***Andromeda tremula* Heer**

1967. Palamarev, p. 94.

Location and stratigraphical range: Brezhani (Goreshitsa Formation, Lower Oligocene).

APOCYNOPHYLLUM Unger – APOCYNACEAE

***Apocynophyllum firma* (Heer) Sveshnik. & Budantzev**

1859. *Acerates firma* Heer, p. 21, Pl. 104, Fig. 9.

1964. Sveshnikova & Budantzev in Budantzev & Sveshnikova, p. 107, Pl. 7, Figs 12-14

***Apocynophyllum neriifolium* Heer**

2008. Bozukov & al., p. 177, Pl. 4, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

ARBUTUS L. – ERICACEAE

***Arbutus guriensis* Usnadze**

1999b. Bozukov, p. 52, Pl. 3, Fig. 4.

2004. Palamarev & Bozukov, p. 136, Pl. 3, Fig. 1.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

BERCHEMIA Neck. ex DC. – RHAMNACEAE

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

2008. Bozukov & al., p. 177, Pl. 5, Fig. 5.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Chukurovo (coal-bearing formation, Middle Miocene).

BETULA L. – BETULACEAE

***Betula attenuata* Göpp.**

1932. Konjarov, p. 54, Pl. 19, Fig. 7.

Rev.: *Alnus suborientalis* Czeczott & Skirg.; Bozukov, hoc loco.

***Betula subpubescens* Göpp.**

2008. Bozukov & al., p. 175, Pl. 2, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

BUMELIA Sw. – SAPOTACEAE

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

1988. Černjavska & al., p. 30.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene–Lower Oligocene).

***Bumelia* sp.**

1961. Palamarev, p. 188, Fig.-text 25.

Material: Li.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene).

Collection: IBER (BAS).

CARPINUS L. – BETULACEAE

***Carpinus betulus* L.**

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.

Material: Ca.

Location and stratigraphical range: Sofia Basin – Novi Iskar, Podgumer (Novi Iskar Formation, Upper Pontian – Lower Dacian) – Lozenets (Lozenets Formation, Romanian).

Collection: Unknown.

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

1982. Kitanov, p. 37.

1988. Palamarev & Kitanov, p. 193, Pl. 7, Figs. 10-12; Pl. 8, Fig. 7.

2011. Bozukov & al., p. 9, Pl. 2, Fig. 9.

Material: Ca.

Location and stratigraphical range: Garmen (Nevrokop Formation, Upper Pontian – Lower Dacian); Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian); Sofia Basin – Zemlyane (Lozenets Formation, Romanian). The following localities must be omitted: Pelovo, Stavertsi (Krivodol Formation – Volhynian).

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

1932. Konjarov, p. 54, pars Pl. 20, Figs 2, 4 (non Fig. 3); p. 98, Pl. 26, Figs 3-5; p. 129, Pl. 40, Fig. 6; p. 173, Pl. 58, Fig. 4; Pl. 59, Fig. 1; p. 244, Pl. 73, Fig. 4.

2004. Palamarev & Bozukov, p. 135, Pl. 5, Fig. 3.

2008. Bozukov & al., p. 175, Pl. 2, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Chukurovo (coal-bearing formation, Middle Miocene); Golyam Manastir (Elhovo Formation, Pontian).

***Carpinus* sp.**

1932. Konjarov, p. 166, Pl. 53, Fig. 6.

Material: Ca.

Location and stratigraphical range: Sofia Basin – Novi Iskar (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: Unknown.

CARYA Nutt. – JUGLANDACEAE

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

2004. Palamarev & Bozukov, p. 135, Pl. 4, Fig. 5.

1964a. Palamarev, p. 15.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

CASSIOPHYLLUM Geyl. – FABACEAE

***Cassiophyllum berenices* (Unger) Kräusel**

1961. Palamarev, p. 185, Pl. 8, Fig. 1; Fig.-text 18.

1988. Černjavska & al., p. 31.

Location and stratigraphical range: Pavelsko (Pavel-sko sandy argillaceous formation, Upper Eocene-Lower Oligocene); Borovets (coal-bearing formation, Upper Oligocene).

CASTANEA Mill. – FAGACEAE

Castanea atavia Unger

1932. Konjarov, p. 125, Pl. 32, Fig. 2.

1964a. Palamarev, p. 18.

Rev.: *Quercus pliovariabilis* Kolak.; Bozukov, hoc loco.

***Castanea sativa* Mill. foss.**

1932. *C. atavia* Unger; Konjarov, p. 125, Pl. 32, Fig. 2; p. 166, Pl. 53, Fig. 4.

1964a. Palamarev, p. 18.

Location and stratigraphical range: Chukurovo (coal-bearing formation, Middle Miocene).

CASTANOPSIS (D. Don) Spach – FAGACEAE

Castanopsis pliovariabilis (Kolak.) Kolak.

1999a. Bozukov, p. 4, Pl. 1, Fig. 5.

Rev.: 2004. *Quercus pliovariabilis* Kolak.; Palamarev & Bozukov, p. 134, Pl. 3, Fig. 4.

CEDRELA P. Browne – MELIACEAE

***Cedrela attica* (Unger) Palam. & Petkova**

2008. Bozukov & al., p. 176, Pl. 3, Fig. 6.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

CELASTRUS L. – CELASTRACEAE

***Celastrus oeningensis* Wonnacott**

2008. Bozukov & al., p. 177, Pl. 4, Fig. 5.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

CELTIS L. – ULMACEAE

***Celtis praebalkanica* Palam.**

2004. Palamarev, p. 4, Pl. 1, Fig. 1-3.

Material: Ca.

Location and stratigraphical range: Varshets (Limestone tuff, Middle Villafranchian).

Collection: IBER (BAS).

CERATOPHYLLUM L. – CERATOPHYLLACEAE

Ceratophyllum demersum L. foss.

2010. *C. demersum* L. foss., Tsenov, p. 742, Pl. 1, Figs. 4-5.

Rev.: *C. submersum* L. foss.; Bozukov & al. (2012).

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

Location and stratigraphical range: Melnik (Kalinanska Formation, Lower Pontian).

***Ceratophyllum schrotzburgense* Hantke**

2012. Bozukov & al., p. 988, Pl. 2, Fig. 2.

1966. *C. submersum* L. foss.; Petkova & Kitanov, p. 10, Pl. 7, Fig. 4.

The following text must be omitted: 1982. Palamarev, p.10, Pl. 3, Fig. 9.

Location and stratigraphical range:

The following text must be omitted: Melnik (Kalimanska Formation, Lower Pontian).

***Ceratophyllum submersum* L. foss.**

1982. Palamarev, p. 10, Pl. 3, Fig. 9.

2012. Bozukov & al., p. 988, Pl. 1, Fig. 4; Pl. 2, Figs 1, 3-4.

2010. *C. demersum* L. foss., Tsenov, p. 742, Pl. 1, Figs. 4-5.

2011. *Potamogeton pectinatus* L. foss.; Bozukov & al., p. 12, Pl. 3, Figs 8-9.

Material: Ca, Stem with leaves.

Location and stratigraphical range: Melnik (Kalinanska Formation, Lower Pontian), Ognyanovo (Baldevo Formation, Pontian); Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: IBER (BAS).

Note: Palamarev & Petkova (1987) incorrectly revised *C. submersum* published by Palamarev (1982, p.10, Pl. 3, Fig. 9.) as *C. schrotzburgense*.

CERCIDIPHYLLUM Siebold & Zucc. – CERCIDIPHYLLACEAE

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

1932. Sp. indeterminata; Konjaroff, p. 239, Pl. 72, Figs 5-6.

Location and stratigraphical range: Smolyan (coal-bearing formation, Lower Oligocene).

CINNAMOMUM Blume – LAURACEAE

Cinnamomum polymorphum A. Braun

1932. Konjarov, Pl. 21, Figs 3-5; p. 167, Pl. 56, Fig. 7; p. 173, Pl. 58, Fig. 2.

1982. Kitanov, p. 37, Pl. 1, Fig. 3.

Cinnamomum spectabile Heer

1932. Konjaroff, p. 54, Pl. 22, Fig. 1.

1966. Palamarev & Petkova, p. 57.

Rev.: *Daphnogene spectabile* (Heer) Knobloch; Bozukov, hoc loco.

CORNUS L. s. l. – CORNACEAE

Cornus rhamnifolia O. Weber

1852. Weber, p. 192, Pl. 21, Fig. 8.

1961. Palamarev, p. 187, Pl. 8, Fig. 3; Fig.-text 23.

Material: Li.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene).

Collection: IBER (BAS).

CORYLUS L. – BETULACEAE

Corylus avelana L. foss.

Material: Ca.

The following text must be omitted: Li.

COTINUS Mill. – ANACARDIACEAE

Cotinus orbiculatus (Heer) Budantzev

1982. *C. coggygria* (L.) Scop. foss.; Kitanov, p. 37.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

CRATAEGUS L. – ROSACEAE

Crataegus pentagina Waldst. & Kit. ex Willd. foss.

2004. Palamarev, p. 8, pl. 1, fig. 4-6.

Material: Ca.

Location and stratigraphical range: Varshets (Limestone tuff, Middle Villafranchian).

Collection: IBER (BAS).

CYCLOBALANOPSIS Oerst – FAGACEAE

Cyclobalanopsis kryshstofovichii Kolak.

1964b. Palamarev, p. 130, Pl. 1, Fig. 1; Pl. 2, Fig. 4.

1967. Palamarev, p. 93.

Rev.: 2004. *Quercus abchasica* Kolak.; Palamarev & Tsenov, p. 150, Pl. 2, Fig. 4.

CYCLOCARYA Iljinsk. – JUGLANDACEAE

Cyclocarya aschutassica Iljinskaja

1994. Iljinskaja, p. 44, Pl. 7, Figs 1-5; Pl. 8, Fig. 4; Pl. 9, Fig. 1-3; Fig.-text 35.

1988. *Cyclocarya cyclocarpa* (Schlecht.) Knobloch; Černjavská & al., p. 30.

Material: Li.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene-Lower Oligocene).

Collection: IBER (BAS).

Cyclocarya cyclocarpa (Schlecht.) Knobloch

1988. Černjavská & al., p. 30.

Rev.: *Cyclocarya aschutassica* Iljinskaja; Palamarev, in collect.

DALBERGIA L. – FABACEAE

Dalbergia bella Heer

1988. Černjavská & al., p. 31.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene).

Dalbergia rectinervis Ettingsh.

2009. Bozukov & al., p. 274, Pl. 2, Fig. 4.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

DAPHNOGENE Unger – LAURACEAE

Daphnogene bilinica (Unger) Kvaček & Knobloch

1975. Palamarev & Petkova, p. 205.

2008. Bozukov & al., p. 174, Pl. 1, Fig. 4.

1982. *Cinnamomum polymorphum* A. Braun; Kitanov, p. 37, Pl. 1, Fig. 3.

Location and stratigraphical range: Padesh (Padesh Formation, Upper Eocene – Lower Oligocene); Valche Pole, Zlatoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

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

2008. Bozukov & al., p. 174, Pl. 1, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).***Daphnogene cinnamomifolia* (Brongn.) Unger**

2008. Bozukov & al., p. 174, Pl. 1, Fig. 3.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).***Daphnogene lanceolata* Unger**

2008. Bozukov & al., p. 174, Pl. 1, Fig. 6.

Location and stratigraphical range: Valche Pole, Zlataoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).***Daphnogene spectabilis* (Heer) Knobloch**

2008. Bozukov & al., p. 174, Pl. 2, Fig. 3.

1856. *Cinnamomum spectabile* Heer, p. 91, Pl. 96, Figs 1-8.

1932. Konjaroff, p. 54, Pl. 22, Fig. 1.

1966. Palamarev & Petkova, p. 57.

Location and stratigraphical range: Belitsa (sandstone and sandy-argillaceous formations, Lower Oligocene); Pernik (coal-bearing formation, Upper Oligocene); Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).***Daphnogene ungeri* Heer**

2008. Bozukov & al., p. 174, Pl. 4, Fig. 6.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).**DIOSPYROS L. – EBENACEAE*****Diospyros anceps* Heer**

2008. Bozukov & al., p. 176, Pl. 4, Fig. 8.

1961. *D. brachysepala* A. Braun; Palamarev, p. 188, Pl. 7, Fig. 4.**Location and stratigraphical range:** Borovets (coal-bearing formation, Upper Oligocene); Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).*Diospyros brachysepala* A. Braun

1961. Palamarev, p. 188, Pl. 7, Fig. 4.

Rev.: *Diospyros anceps* Heer; Bozukov, hoc loco.**DRYOPHYLLUM Debey – FAGACEAE*****Dryophyllum dewalquei* Saporta & Marion**

2008. Bozukov & al., p. 175, Pl. 2, Fig. 6.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).**ENGELHARDIA Lesch. ex Blume – JUGLANDACEAE*****Engelhardia orsbergensis* (P. Wessel & C.O. Weber) Jähnichen, Mai & H. Walther**

1988. Černjavská & al., p. 30.

2008. Bozukov & al., p. 176, Pl. 2, Fig. 5.

2009. Bozukov & al., p. 274, Pl. 2, Fig. 8.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene – Lower Oligocene); Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene); Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).**EOTRIGONOBALANUS H. Walther & Kvaček – FAGACEAE*****Eotrigonobalanus furcinervis* (Rossm.) H. Walther & Kvaček**1932. *Quercus furcinervis* (Rossm.) Unger; Konjarov, p. 129, Pl. 42, Figs 1-4; Pl. 46, Figs 1-3; p. 222, Pl. 66, Figs 1-3.

1961. Palamarev, p. 181, Pl. 3, Figs 2-4.

EUCALYPTUS L'Hér. – MYRTACEAE***Eucalyptus* "oceanica" Unger**

1932. Konjarov, p. 129, Pl. 43, Figs 5-5a.

Rev.: 2011. *Periploca* cf. *kryštofovichii* Kornil.; Bozukov, p. 42, Pl. 1, Fig. 9.**EUGENIA L. – MYRTACEAE*****Eugenia apollinis* Unger**

1850. Unger, p. 52, Pl. 35, Figs 3-18.

2009. Bozukov & al., p. 274, Pl. 2, Fig. 1.

Material: Li.**Location and stratigraphical range:** Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).**Collection:** IBER (BAS).***Eugenia haeringiana* Unger**

1850. Unger, p. 52, Pl. 35, Fig. 19.

1961. Palamarev, p. 187, Pl. 6, Fig. 2; Fig.-text 22.

2009. Bozukov & al., p. 274, Pl. 2, Fig. 2.

Material: Li.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene); Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

Collection: IBER (BAS).

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

1994. Palamarev & Petkova, p. 35, Pl. 3, Fig. 5, p.p., excl. Pl. 1, Fig. 3 = *Periploca* cf. *kryshtofovichii* Kornil.

EUONYMUS L. – CELASTRACEAE

***Euonymus* aff. *japonicus* Thunb.**

2011. Bozukov & al., p. 9, Pl. 3, Figs 2-3.

Material: Li.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: IBER (BAS).

EURYA Thunb. – THEACEAE

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

2008. Bozukov & al., p. 176, Pl. 4, Fig. 3.

Location and stratigraphical range: Zlatoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

FAGUS L. – FAGACEAE

Fagus attenuata Göpp.

1988. Palamarev & Kitanov, p. 187, Pl. 4, Fig. 11.

Rev.: *Fagus silesiaca* H. Walther & Zastawniak; Bozukov hoc loco.

Fagus orientalis Lipsky foss.

1934. Stefanov & Jordanov, p. 16.

1982. Kitanov, p. 37, Pl. 2, Fig. 3.

Rev.: *Fagus pliocaenica* Saporta; Bozukov, hoc loco.

***Fagus pliocaenica* Saporta**

1932. Konjaroff, p. 166, Pl. 53, Fig. 5.

2008. Bozukov & al., p. 175, Pl. 4, Fig. 1.

1934. *F. orientalis* Lipsky, Stefanov & Jordanov, p. 16.

1982. *F. orientalis* Lipsky foss.; Kitanov, p. 37, Pl. 2, Fig. 3.

1984. Kitanov, p. 60, Pl. 11, Fig. 2.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Sofia Basin – Novi Iskar (Novi Iskar Formation, Upper Pontian – Lower Dacian), Zemlyane (Lozenets Formation, Romanian).

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

1988. *Fagus attenuata* Göppert, Palamarev & Kitanov, p. 187, Pl. 4, Fig. 11.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian-Lower Dacian).

FICUS L. – MORACEAE

"*Ficus*" *insignis* Ettingsh.

1853. Ettingshausen, p. 42, Pl. 10, Fig. 7.

FRAXINUS L. – OLEACEAE

***Fraxinus excelsior* L. foss.**

Material: Ca.

The following text must be omitted: Li.

GLEDITSIA L. – FABACEAE

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

2004. Palamarev & Bozukov, p. 135, Pl. 5, Fig. 4.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

HARTIA Dunn – THEACEAE

***Hartia palaeorhodopensis* Bozukov & Palam.**

2009. Bozukov & al., p. 274, Pl. 2, Fig. 3.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

JUGLANS L. – JUGLANDACEAE

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

1988. Černjavska & al., p. 30.

Location and stratigraphical range: Pavelsko (Pavel-sko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).

***Juglans regia* L. foss.**

1982. Kitanov, p. 37, Pl. 3, Fig. 1.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozets Formation, Romanian).

***Juglans* sp.**

1932. Konjarov, p. 166, Pl. 53, Fig. 3.

Material: Li.

Location and stratigraphical range: Sofia Basin – Novi Iskar (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: Unknown

LAUROPHYLLUM Göpp. – LAURACEAE

***Laurophyllum acutimontanum* Mai**

2008. Bozukov & al., p. 174, Pl. 1, Fig. 2.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).

LAURUS L. – LAURACEAE

***Laurus pliocenica* (Saporta & Marion) Kolak.**

2008. Bozukov & al., p. 174, Pl. 3, Fig. 3.

2011. Bozukov & al., p. 6, Pl. 1, Figs. 5-10.

Material: Cu, Li.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Beli Breg Coal Casin – Gaber (Novi Iskar Formation, Upper Pontian-Lower Dacian).

Laurus primigenia Unger

1961. Palamarev, p. 183, Pl. 4, Figs 3-4.

Rev.: *Litsea primigenia* (Unger) Takht.; Bozukov, hoc loco.

Laurus princeps Heer

1961. Palamarev, p. 183, Pl. 5, Figs 1-2; Fig.-text 15.

Rev.: *Persea princeps* (Heer) Schimp.; Bozukov, hoc loco.

LEUCOTHOË D. Don – ERICACEAE

***Leucothoë protogaea* (Unger) Schimp.**

1961. Palamarev, p. 188, Fig.-text 24..

1998. Palamarev & al., p. 14.

2009. Bozukov & al., p. 274, Pl. 1, Fig. 6.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

LINDERA Thunb. – LAURACEAE

***Lindera ovata* Kolak.**

2004. Palamarev & Bozukov, p. 133, Pl. 1, Fig. 2.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

LIQUIDAMBAR L. – ALTINGIACEAE

***Liquidambar europaea* A. Braun**

1932. Konjarov, p. 167, Pl. 56, Fig. 8.

2004. Palamarev & Bozukov, p. 136, Pl. 4, Fig. 2.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

LITSEA Juss. – LAURACEAE

***Litsea ocoteifolia* (Ettingsh.) Imkhan.**

2008. Bozukov & al., p. 174, Pl. 1, Fig. 7.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).

***Litsea primigenia* (Unger) Takht.**

2004. Palamarev & Bozukov, p. 133, Pl. 2, Fig. 1.

2008. Bozukov & al., p. 174, Pl. 2, Fig. 1.

1961. *Laurus primigenia* Unger; Palamarev, p. 183, Pl. 4, Figs 3-4.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene); Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Golyam Manastir (Elhovo Formation, Pontian).

MAGNOLIA L. – MAGNOLIACEAE

***Magnolia diana* Unger**

2004. Palamarev & Bozukov, p. 132, Pl. 1, Fig. 5.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

***Magnolia ludwigii* Ettingsh.**

2009. Bozukov & al., p. 274, Pl. 1, Figs 3-4.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

***Magnolia mirabilis* Kolak.**

2011. Bozukov & al., p. 6, Pl. 1, Figs 3-4.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

MASTIXIA Blume – MASTIXIACEAE

Mastixia meyeri* Kirchh.*Material:** Ca.

The following text must be omitted: Li.

MYRICA L. – MYRICACEAE

***Myrica hakeaefolia* Unger**

1961. Palamarev, p. 179, Fig.-text 6.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene).***Myrica kymeana* (Unger) Berger**

1953. Berger, p. 36, Fig-text 1.

2008. Bozukov & al., p. 175, Pl. 5, Fig. 2.

1867. *Grevillea kymeana* Unger, p. 57, Pl. 6, Fig. 31; Pl. 8, Figs 15-31.**Material:** Li.**Location and stratigraphical range:** Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).**Collection:** IBER (BAS).***Myrica lignitum* (Unger) Saporta s.str.**

2011. Bozukov & al., p. 9, Pl. 3, Fig. 6.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).***Myrica onocleaefolia* Andr.**

1962. Palamarev, p. 17, Fig.-text 1B.

***Myrica* sp.**

1932. Konjarov, p. 239, Pl. 72, Fig. 7.

Material: Li.**Location and stratigraphical range:** Smolyan (coal-bearing formation, Lower Oligocene).**Collection:** Unknown.

NEOLITSEA (Benth.) Merrill – LAURACEAE

***Neolitsea palaeosericea* Takht.**

2008. Bozukov & al., p. 174, Pl. 2, Fig. 1.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).

The following localities must be omitted: Polkovnik Serafimovo (Serafimovo Formation, Lower Eocene-Lower Oligocene); Strazha (Smolyan Formation, Upper Eocene-Lower Oligocene).

NERIUM L. – APOCYNACEAE

***Nerium oleander* L. foss.**

2011. Bozukov & al., p. 12, Pl. 3, Fig. 7.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

NYSSA L. – NYSSACEAE

Nyssa disseminata* (Ludw.) Kirchh.*Material:** Ca.

The following text must be omitted: Li.

***Nyssa* sp.**

1961. Palamarev, p. 186, Pl. 7, Figs 1-2.

Material: Ca.**Location and stratigraphical range:** Borovets (coal-bearing formation, Upper Oligocene).**Collection:** IBER (BAS).

OCOTEA Aubl. – LAURACEAE

***Ocotea euxina* (Kolak.) Imchan.**

1974. Imchanitzkaja in Takhtajan, p. 24, Pl. 7, Fig. 6; Pl. 9, Fig. 6.

2004. Palamarev & Bozukov, p. 133, Pl. 2, Fig. 5.

1957. *Nectandra euxina* Kolak.; Kolakovsky, p. 273, Pl. 15, fig. 4,**Material:** Li.**Location and stratigraphical range:** Golyam Manastir (Elhovo Formation, Pontian).**Collection:** IBER (BAS).***Ocotea heeri* (Gaudin) Takht.**

2004. Palamarev & Bozukov, p. 134, Pl. 2, Fig. 4.

2008. Bozukov & al., p. 174, Pl. 2, Fig. 2.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Golyam Manastir (Elhovo Formation, Pontian).

OLEA L. – OLEACEAE

***Olea notii* Unger**

1867. Unger, p. 62, Pl. 10, Figs 1-12.

OMALANTHUS A. Juss. – EUPHORBIACEAE

***Omalanthus paraeuxinus* Palam.**

1973. *Omalanthus paraeuxinus* Palamarev, p. 86, Pl. 2, Figs 19-20; Pl. 3, Figs 1, 3.

PALIURUS Mill. – RHAMNACEAE

***Paliurus ovoides* (Göpp.) Heer**

2004. *Paliurus spina-christi* Mill. foss., Palamarev & Bozukov, p. 137, Pl. 1, Fig. 6; Pl. 6, Fig. 4.

Material: Ca.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Paliurus spina-christi Mill. foss.

2004. Palamarev & Bozukov, p. 137, Pl. 1, Fig. 6; Pl. 6, Fig. 4.

Rev.: *Paliurus ovoides* (Göpp.) Heer; Bozukov, hoc loco.

PARROTIA C.A. Mey. – HAMAMELIDACEAE

***Parrotia pristina* (Ettingsh.) Stur**

2004. Palamarev & Bozukov, p. 137, Pl. 4, Fig. 1.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

PERIPLUCA L. – ASCLEPIADACEAE

***Peripluca cf. kryshstofovichii* Kornil.**

2008. Bozukov & al., p. 177, Pl. 4, Fig. 7.

1932. “*Eucalyptus*” *oceanica* Unger, Konjarov, p. 129, Pl. 43, Figs 5-5a.

1994. *Eugenia splendens* Petrescu & al., Palamarev & Petkova, p.p., p. 35, Pl. 1, Fig. 3.

Location and stratigraphical range: Suhostrel (Suhostrel Formation, Upper Eocene); Orehovo (Pavelsko sandy argillaceous Formation, Upper Eocene – Lower Oligocene); Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene); Zlatoustovo (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).

PERSEA Mill. – LAURACEAE

***Persea braunii* Heer**

2008. Bozukov & al., p. 174, Pl. 3, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene).

***Persea palaeomorpha* Saporta & Marion**

2009. Bozukov & al., p. 274, Pl. 1, Fig. 5.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene-Lower Miocene).

***Persea pliocenica* (Laurent) Kolak.**

2004. Palamarev & Bozukov, p. 134, Pl. 3, Fig. 5.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

***Persea princeps* (Heer) Schimp.**

1961. *Laurus princeps* Heer, Palamarev, p. 183, Pl. 5, Figs 1-2; Fig.-text 15.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene).

PISTACIA L. – ANACARDIACEAE

***Pistacia cf. miocenica* Saporta**

1868. Saporta, p. 52, Pl. 6, Figs 4-6.

2004. Palamarev & Bozukov, p. 137, Pl. 1, Fig. 1.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

PLATANUS L. – PLATANACEAE

Platanus aceroides Göpp.

1982. Kitanov, p. 37.

Rev.: *Platanus platanifolia* (Ettingsh.) Knobloch; Bozukov, hoc loco.

***Platanus platanifolia* (Ettingsh.) Knobloch**

2008. Bozukov & al., p. 175, Pl. 5, Fig. 1.

1982. *Platanus aceroides* Göpp.; Kitanov, p. 37.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

PLUMERIA L. – APOCYNACEAE

Plumeria cf. caucasica Avakov

Location and stratigraphical range: Padesh (Padesh Formation, Upper Eocene – Lower Oligocene); Pavelsko (Pavelsko sandy argillaceous Formation, Upper Eocene-Lower Oligocene).

POPULUS L. – SALICACEAE

Populus balsamoides Göpp.

1932. Konjaroff, p. 54, Pl. 16, Fig. 1; p. 98, Pl. 25, Fig. 3; p. 171, Pl. 57, Fig. 3.

1961. Palamarev, p. 179, Pl. 1, Fig. 4.

Location and stratigraphical range: Chukurovo (coal-bearing formation, Middle Miocene).

Populus canescens (Aiton) Sm.

1982. Kitanov, p. 37, Pl. 5, Fig. 4.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

Populus nigra L.

1982. Kitanov, p. 37, Pl. 5, Fig. 3.

Location and stratigraphical range: Sofia Basin – Lozenets, Zemlyane (Lozenets Formation, Romanian).

Populus populina (Brongn.) Knobloch

2004. Palamarev & Bozukov, p. 137, Pl. 5, Fig. 2.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Populus tremula L.

1982. Kitanov, p. 37, Pl. 5, Fig. 2.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

PRUNUS L. – ROSACEAE

Prunus fruticosa Pall. foss.

2004. Palamarev, p. 7, pl. 1, fig. 10.

Material: Ca.

Location and stratigraphical range: Varshets (Limestone tuff, Middle Villafranchian).

Collection: IBER (BAS).

PTEROCARYA Kunth – JUGLANDACEAE

Pterocarya paradisiaca (Unger) Iljinsk.

2004. Palamarev & Bozukov, p. 132, Pl. 4, Fig. 5.

1982. *P. pterocarpa* (Mich.) Kunth; Kitanov, p. 37, Pl. 5, Fig. 1.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

Pterocarya pterocarpa (Michx.) Kunth foss.

1982. Kitanov, p. 37, Pl. 5, Fig. 1.

Rev.: *Pterocarya paradisiaca* (Unger) Iljinsk.; Bozukov, hoc loco.

PYRACANTHA M. Roem. – ROSACEAE

Pyracantha coccinea M. Roem. foss.

1983. *Pyracantha coccinea* Roem. foss.; Mai, p. 82, pl. 39, fig. 12-15; pl. 40, fig. 11-12; text-fig. 5: 1-25; text-fig. 10: 10-11; text.-fig. 14.

2004. Palamarev, p. 10, pl. 1, fig. 7-9.

Material: Ca.

Location and stratigraphical range: Varshets (Limestone tuff, Middle Villafranchian).

Collection: IBER (BAS).

QUERCOXYLON Kräusel – FAGACEAE

Quercoxylon marbasianum Hadžiev & Mädler

1962. Hadžiev & Mädler, p. 112, Pl. 1, Figs 1-4; Pl. 2, Figs 1-5; Fig.-text 1.

Holotypus: Pl. 1, Figs 1-4; Pl. 2, Figs 1-5; Fig.-text 1, in Hadžiev & Mädler (1962).

Material: Wo.

Location and stratigraphical range: East Maritsa basin – Troyanovo West (Maritsa Formation, Lower Pontian – Upper Dacian).

Collection: Unknown.

Quercoxylon stojanovii Hadžiev & Mädler

1962. Hadžiev & Mädler, p. 115, Pl. 2, Fig. 6; Pl. 3, Figs 1-5; Fig.-text 2.

Holotypus: Pl. 2, Fig. 6; Pl. 3, Figs 1-5; Fig.-text 2, in Hadžiev & Mädler (1962).

Material: Wo.

Location and stratigraphical range: Sofia Basin – Kutina (Gnilyane Formation, Lower Pontian).

Collection: Unknown.

QUERCUS L. – FAGACEAE

Quercus abchasica Kolak. in Iljinskaja

1980. Iljinskaja, p. 25.

2004. Palamarev & Tsenov, p. 150, Pl. 2, Fig. 4.

1964b. *Cyclobalanopsis kryshstofovichii* Kolak.; Palamarev, p. 130, Pl. 1, Fig. 1; Pl. 2, Fig. 4.

1967. Palamarev, p. 93.

Material: Li.

Location and stratigraphical range: Brezhani (Gore-shtitsa Formation, Lower Oligocene); Ognyanovo (Baldevo Formation, Pontian).

Collection: IBER (BAS).

***Quercus aff. acrodonta* Seem.**

2011. Bozukov & al., p. 8, Pl. 2, Figs 1-2.

Material: Li.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: IBER (BAS).

***Quercus cardanii* A. Massal.**

1982. *Q. sessiliflora* Salisb. foss.; Kitanov; p. 37.

1982. *Q. hartwissiana* Steven foss.; Kitanov; p. 37.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

***Quercus cerris* L. foss.**

1982. Kitanov, p. 37.

1988. Palamarev & Kitanov, p. 189, Pl. 7, Figs 3-4, 7-8.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

***Quercus coccifera* L. foss.**

1932. Konjarov, p. 125, Pl. 32, Fig. 6; p. 166, Pl. 55, Figs 5-7.

***Quercus drymeja* Unger**

1932. Konjarov, p. 125, Pl. 32, Figs 3-5; p. 166, Pl. 55, Fig. 4.

2004. Palamarev & Tsenov, p. 150, Pl. 2, Fig. 3; Pl. 3, Fig. 3, 4.

2011. Bozukov & al., p. 8, Pl. 2, Fig. 4.

Material: Cu, Li.

Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian); Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Quercus drymeja Unger

1967. Palamarev, p. 93.

1998. Palamarev & al., p. 15.

Rev.: 2011. *Quercus lonchitis* Unger; Bozukov & al., p. 8.

Quercus furcinervis Rossm.

1961. Palamarev, p. 181, Pl. 3, Figs 2-4.

Rev.: *Eotrigonobalanus furcinervis* (Rossm.) H. Walther & Kvaček; Bozukov, hoc loco.

***Quercus gigas* Göpp.**

1855. Göppert, p. 16, Pl. 8, Fig. 2.

2011. Bozukov & al., p. 8, Pl. 2, Figs 7-8.

Material: Li.

Location and stratigraphical range: Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

Collection: IBER (BAS).

Quercus hartwissiana Steven foss.

1982. Kitanov; p. 37.

Rev.: *Quercus cardanii* A. Massal.; Bozukov, hoc loco.

***Quercus ilex* L. foss.**

2004. Palamarev & Tsenov, p. 150, Pl. 1, Fig. 3.

Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian).

***Quercus kubinyi* (Kováts ex Ettingsh.) Czecczott**

2004. Palamarev & Bozukov, p. 134, Pl. 3, Fig. 2.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

***Quercus licudensis* Knobl. & Velitzelos**

1986. Knobloch & Velitzelos, p. 11, Pl. 3, Figs. 6, 9; Pl. 4, Fig. 1.

2004. Palamarev & Tsenov, p. 148, Pl. 1, Fig. 7.

Material: Li.

Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian).

Collection: IBER (BAS).

***Quercus lonchitis* Unger**

1850. Unger, p. 33, Pl. 9, Figs 3-8.

2004. Palamarev & Tsenov, p. 150, Pl. 1, Fig. 4.

1967. *Q. drymeja* Unger, Palamarev, p. 93.

1998. Palamarev & al., p. 15.

Material: Li.

Location and stratigraphical range: Brezhani (Gore-shtitsa Formation, Lower Oligocene); Bobovdol (coal-bearing formation, Upper Oligocene); Ognyanovo (Baldevo Formation, Pontian).

***Quercus lyellii* Heer**

2004. Palamarev & Tsenov, p. 150, Pl. 2, Fig. 2.
2008. Bozukov & al., p. 175, Pl. 5, Fig. 3.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Ognyanovo (Baldevo Formation, Pontian).

***Quercus mediterranea* Unger**

2004. Palamarev & Tsenov, p. 149, Pl. 1, Fig. 5.

Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian).

***Quercus neriifolia* A. Braun**

2004. Palamarev & Tsenov, p. 151.
2004. Palamarev & Bozukov, p. 134, Pl. 4, Fig. 3.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian); Ognyanovo (Baldevo Formation, Pontian).

***Quercus pliovariabilis* Kolak.**

1964. Kolakovsky, p. 88, Pl. 31, Fig. 1.
2004. Palamarev & Bozukov, p. 134, Pl. 3, Fig. 4.
2004. Palamarev & Tsenov, p. 149, Pl. 2, Fig. 2.
1932. *Castanea atavia* Unger; Konjarov, p. 125, Pl. 32, Fig. 2.
1964a. Palamarev, p. 18.
1999a. *Castanopsis pliovariabilis* (Kolak.) Kolak.; Bozukov, p. 4, Pl. 1, Fig. 5.

Location and stratigraphical range: Chukurovo (coal-bearing formation, Middle Miocene); Satovcha (Sivik Formation, Middle Miocene); Oranovo (Simitli Formation, Maeotian); Golyam Manastir (Elhovo Formation, Pontian); Ognyanovo (Baldevo Formation, Pontian).

***Quercus pontica-miocaenica* Kubát**

2004. Palamarev & Tsenov, p. 148, Pl. 2, Fig. 1, 6.
Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian).
Note: According to Walther & Zastawniak (1991), *Q. pontica-miocaenica* belongs to *Q. gigas* Göpp.

***Quercus pseudocastanea* Göpp.**

2004. Palamarev & Tsenov, p. 149, Pl. 1, Fig. 1.
Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian).

Quercus sessiliflora foss. auct. non Salisb.

1982. Kitanov; p. 37.
Rev.: *Quercus cardanii* A. Massal.; Bozukov, hoc loco.

***Quercus sosnowskyi* Kolak.**

2004. Palamarev & Tsenov, p. 149, Pl. 1, Fig. 3; Pl. 2, Fig. 5; Pl. 3, Fig. 1, 2.
2011. Bozukov & al., p. 9, Pl. 2, Figs 5-6.

Material: Cu, Li.

Location and stratigraphical range: Ognyanovo (Baldevo Formation, Pontian); Beli Breg Coal Basin – Gaber (Novi Iskar Formation, Upper Pontian – Lower Dacian).

RHAMNUS L. – RHAMNACEAE***Rhamnus rectinervis* Heer**

2004. Palamarev & Bozukov, p. 137, Pl. 4, Fig. 4.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

***Rhamnus* sp.**

1932. Konjaroff, p. 129, Pl. 43, Figs 4.

Material: Li.

Location and stratigraphical range: Dospei (bituminous schist formation, Upper Oligocene – Lower Miocene).

Collection: Unkown.

RHUS L. – ANACARDIACEAE***Rhus juglandogene* Ettings.**

The following text must be omitted:

1932. Konjaroff, 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 merianii* Heer**

1932. Konjaroff, 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.

ROBINIA L. – FABACEAE***Robinia regelii* Heer**

2004. Palamarev & Bozukov, p. 135, Pl. 6, Fig. 2.

Material: Ca.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

RUBUS L. – ROSACEAE

***Rubus merianii* (Heer) Kolak.**

2008. Bozukov & al., p. 175, Pl. 5, Fig. 3.

Material: Li.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

SALIX L. – SALICACEAE

***Salix alba* L.**

1982. Kitanov, p. 37, Pl. 6, Fig. 1.

***Salix* aff. *haidingeri* Ettings.**

1867. Ettingshausen, p. 88, Pl. 29, Figs 9-16 (non Fig. 8).

2004. Palamarev & Bozukov, p. 137, Pl. 6, Fig. 7.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

***Salix lavateri* A. Braun emend. Heer**

2004. Palamarev & Bozukov, p. 137, Pl. 3, Fig. 6.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

***Salix* sp.**

1932. Konjarov, p. 244.

Material: Li.

Location and stratigraphical range: Baldevo (Baldevo Formation, Pontian).

Collection: Unknown.

SAPINDUS Tourn. ex L. – SAPINDACEAE

***Sapindus falcifolius* (A. Braun) A. Braun**

2004. Palamarev & Bozukov, p. 136, Pl. 2, Fig. 3.

2008. Bozukov & al., p. 177, Pl. 5, Fig. 7.

Location and stratigraphical range: Valche Pole, Zlatoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Golyam Manastir (Elhovo Formation, Pontian).

***Sapindus graecus* Unger**

1867. Unger, p. 73, Pl. 12, Figs 1-23.

2008. Bozukov & al., p. 176, Pl. 3, Fig. 1.

Material: Li.

Location and stratigraphical range: Zlatoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

Collection: IBER (BAS).

***Sapindus ungeri* Ettingsh.**

1988. Černjavská & al., p. 31.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene-Lower Oligocene); Borovets (coal-bearing formation, Upper Oligocene).

SASSAFRASA T. Nees – LAURACEAE

***Sassafras ferretianum* A. Massal.**

2008. Bozukov & al., p. 174, Pl. 1, Fig. 7.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

SOPHORA L. – FABACEAE

***Sophora europaea* Unger**

1988. Černjavská & al., p. 31.

2004. Palamarev & Bozukov, p. 135, Pl. 6, Fig. 6.

Location and stratigraphical range: Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene-Lower Oligocene); Golyam Manastir (Elhovo Formation, Pontian).

STEWARTIA L. – THEACEAE

***Stewartia* aff. *pentagina* L'Her.**

1998. Palamarev & al., p. 15.

Material: Li.

Location and stratigraphical range: Bobovdol (coal-bearing formation, Upper Oligocene).

Collection: IBER (BAS).

STYRAX L. – STYRACACEAE

***Styrax pseudoofficinale* Baik. in Kryshtofovich & Baikovskaja**

1965. Kryshtofovich & Baikovskaja, p. 120, Pl. 36, Figs 5, 6; Fig.-text 40.

2004. Palamarev & Bozukov, p. 136, Pl. 2, Fig. 2.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

SWIDA Opiz (= *Thelycrania* Endl.)- CORNACEAE

***Swida sanguinea* (L.) Opiz foss.**

2004. Palamarev, p. 11, pl. 1, fig. 11-12.

Material: Ca.

Location and stratigraphical range: Varshets (Limestone tuff, Middle Villafranchian).

Collection: IBER (BAS).

SYMPLOCOS Jacq. – SYMPLOCACEAE

***Symplocos brezanii* Palam.**

Holotypus: N B-61, Pl. 4, Fig. 1, in Palamarev & Petkova (1966).

THEVETIA Adans. – APOCYNACEAE

***Thevetia sophiae* (C.O. Weber) Palam. & Petkova**

1988. *Echitonium sophiae* C.O. Weber; Černjavská & al., p. 31.

Location and stratigraphical range: Oreshets (Layer of massive dark-grey limestone, Priabonian); Suhostrel (Suhostrel Formation, Upper Eocene); Pavelsko (Pavelsko sandy argillaceous formation, Upper Eocene-Lower Oligocene); Braikovitza (Braikovitza Laka Formation, Upper Eocene – Lower Oligocene); Momchilovtsi (Sandy argillaceous formation, Lower Oligocene); Leshko, Padesh (Padesh Formation, Upper Eocene – Lower Oligocene); Strazha (Smolyan Formation, Upper Eocene-Lower Oligocene).

TREMA Lour. – ULMACEAE

***Trema aff. micrantha* (L.) Blume**

1998. Palamarev & al., p. 15.

Material: Li.

Location and stratigraphical range: Bobovdol (coal-bearing formation, Upper Oligocene).

Collection: IBER (BAS).

TRIGONOBALANOPSIS Kvaček & H. Walther – FAGACEAE

***Trigonobalanopsis rhamnoides* (Rossm.) Kvaček & H. Walther**

2008. Bozukov & al., p. 175, Pl. 5, Fig. 4.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

ULMUS L. – ULMACEAE

***Ulmus carpinoides* Göpp.**

1932. Konjaroff, p. 54, Pl. 20, Fig. 6.

Ulmus longifolia Unger

1982. Kitanov, p. 37.

Rev.: *Ulmus pyramidalis* Göpp.; Bozukov, hoc loco.

***Ulmus pyramidalis* Göpp.**

2004. Palamarev & Bozukov, p. 136, Pl. 3, Fig. 3.

2008. Bozukov & al., p. 175, Pl. 3, Fig. 5.

1982. *U. longifolia* Unger; Kitanov, p. 37.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene); Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene); Sofia Basin – Lozenets, Zemlyane (Lozenets Formation, Romanian); West Maritsa basin – Merichleri (Merichleri limestone formation, Oligocene).

VITIS L. – VITACEAE

***Vitis sylvestris* C.C. Gmel. foss.**

1982. Kitanov, p. 37, Pl. 4, Fig. 2.

Location and stratigraphical range: Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

WISTERIA Nutt. – FABACEAE

***Wisteria cf. falax* (Nath.) Tanai & Onoe**

1961. Tanai & Onoe, p. 45, Pl. 10, Fig. 6; Pl. 14, Figs 2-4.

2004. Palamarev & Bozukov, p. 135, Pl. 2, Fig. 6.

1967. *Sophora falax* Nath.; Nathorst, p. 58, pars Pl. 10, Figs 11, 12; Pl. 12, Figs 1, 2.

Material: Li.

Location and stratigraphical range: Golyam Manastir (Elhovo Formation, Pontian).

Collection: IBER (BAS).

ZANTHOXYLUM L. – RUTACEAE

Zanthoxylum juglandinum A. Braun

1851. A. Braun, p. 87.

2008. Bozukov & al., p. 176, Pl. 4, Fig. 2.

Material: Li.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

Collection: IBER (BAS).

ZELKOVA Spach – ULMACEAE

Zelkova carpinifolia (Pall.) K. Koch foss.

1982. Kitanov, p. 37, Pl. 3, Figs 2-3.

Rev.: *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Bozukov, hoc loco.

Zelkova crenata Spach

1932. Konjarov, p. 166, Pl. 56, Fig. 2; p. 173, Pl. 58, Fig. 3.

Rev.: *Zelkova zelkovifolia* (Unger) Bůžek & Kotl.; Bozukov, hoc loco.

***Zelkova zelkovifolia* (Unger) Bůžek & Kotl.**

2004. Palamarev & Bozukov, p. 136, Pl. 1, Fig. 4.

2008. Bozukov & al., p. 175, Pl. 3, Fig. 2.

1932. *Z. crenata* Spach; Konjarov, p. 166, Pl. 56, Fig. 2; p. 173, Pl. 58, Fig. 3.

1932. *Z. ungeri* Kováts; Konjarov, p. 54, Pl. 7; p. 98, Pl. 7; p. 125, Pl. 34, Figs 1-4; p. 129, Pl. 43, Fig. 1.

1982. *Z. carpinifolia* (Pall.) K. Koch foss.; Kitanov, p. 37, Pl. 3, Figs 2-3.

Location and stratigraphical range: Valche Pole (Valche Pole Molasse formation, Upper Oligocene – Lower Miocene); Golyam Manastir (Elhovo Formation, Pontian); Sofia Basin – Zemlyane (Lozenets Formation, Romanian).

LILIOPSIDA

ARACEAECARPUM Wendl. – ARACEAE

***Araceaecarpum* sp.**

1964b. Palamarev, p. 136, Pl. 10, Fig. 3.

Material: Ca.

Location and stratigraphical range: Brezhani (Gore-shititsa Formation, Lower Oligocene).

Collection: Unknown.

CYPERACITES Schimp. – CYPERACEAE

***Cyperacites chavannesii* (Heer) Schimp.**

Location and stratigraphical range: Eleshnitsa (Kupen Formation, Upper Eocene – Lower Oligocene).

***Cyperacites* sp.**

1972. Zastawniak, p. 54, Pl. 29, Fig. 1; Fig.-text 4d.

2000. Bozukov, p. 28, Pl. 5, Fig. 1.

Material: Li

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

Collection: IBER (BAS).

PALMOPHYLLUM Conw. – ARECACEAE

***Palmophyllum* sp.**

2008. Bozukov & al., p. 177, Pl. 5, Fig. 9.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

POTAMOGETON L. – POTAMOGETONACEAE

Potamogeton pectinatus L. foss.

2011. Bozukov & al., p. 12, Pl. 3, Figs 8-9.

Rev.: *Ceratophyllum submersum* L. foss.; Bozukov & al. (2012).

SABAL Adans. – ARECACEAE

***Sabal* sp.**

1932. Konjarov, p. 222.

Material: Li.

Location and stratigraphical range: Merichleri (Merichleri limestone formation, Oligocene).

Collection: Unknown.

SMILAX L. – SMILACACEAE

***Smilax weberi* P. Wessel**

1932. *Smilax* sp., Konjarov, p. 222, Pl. 65, Fig. 3.

Location and stratigraphical range: Merichleri (Merichleri limestone formation, Oligocene).

Collection: Unknown.

Smilax sp.

1932. Konjarov, p. 222, Pl. 65, Fig. 3.

Rev.: *Smilax weberi* P. Wessel; Bozukov, hoc loco.

TRACHYCARPUS Wendl. – ARECACEAE

***Trachycarpus rhapifolia* (Sternb.) Takht.**

1988. Černjavská & al., p. 31.

TYPHA L. – TYPHACEAE

***Typha latissima* A. Braun ex Heer**

1982. *T. latifolia* L. foss.; Kitanov, p. 37, Pl. 1.

Location and stratigraphical range: Borovets (coal-bearing formation, Upper Oligocene); Sofia Basin – Zemlyane (Lozets Formation, Romanian).

***Typha* sp.**

2008. Bozukov & al., p. 177, Pl. 5, Fig. 6.

Material: Li.

Location and stratigraphical range: Valche Pole (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

Collection: IBER (BAS).

INCERTAE SEDIS

***Macclintockia basinervis* (Rossm.) Knobloch**

2008. Bozukov & al., p. 177, Pl. 5, Fig. 6.

Location and stratigraphical range: Valche Pole,

Zlatoustovo (Valche Pole molasse formation, Upper Oligocene – Lower Miocene).

Collection: IBER (BAS).

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