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Contribution to the woody flora of Greece

In the years 1979 - 1981 Institute of Dendrology of the Polish Academy of Sciences in Kórnik has organized three dendrological expeditions to Greece in cooperation with the Goulandris Natural History Museum, Kifissia near Athens. The aim of these expeditions was on the one hand to collect comparative herbarium materials on studies in the field of woody plant taxonomy and on the other, to collect data on stands of individual species for the needs of a future chorological analyses and preparation of point maps of distribution. Field studies were performed primarily in coastal regions up to an elevation of about 800 - 1000 m, in the region where the two basic floristic formations of the Mediterranean, the maquis and the phrygana, occur.

The first expedition worked in northeastern Greece (30.05 - 30.06.1979) in the region of Thrace and eastern and southern Macedonia together with Chalkidiki peninsula and Thasos Is. The second expedition was directed to the Peloponnisos (6.09. - 6.10.1980). Finally, the third expedition (7 - 27.09.1981) concentrated its activities in western Greece (Ipiros and Akarnania).

As a result of work done in these three expeditions 1768 herbarium items were collected represented by 204 species from 113 genera and 48 families and also some wood samples. Besides, several thousands records were made of stands of many common species which, permits the filling in of apparent gaps in the ranges of distribution being analysed now by the method of point maps. These gaps were formed due to insufficient knowledge on the distribution of these taxa. The collections are stored in the Herbarium and Dendrological Museum of the Institute of Dendrology in Kórnik and duplicates have been transferred to the Goulandris Natural History Museum in Kifissia.

Taking into consideration the lack of exact data on the localization of stands for the needs of chorological studies on trees and shrubs of Greece we have decided to publish our collections particularly since besides species that are more or less common we have discovered several new stands of less known species or rare ones such as *Bupleurum fruticosum*, *Malosorbus florentina*, *Eriolobus trilobatus*, *Juniperus drupacea*,

Chamaecytisus subidaeus, *Thymbra spicata*, *Hypericum hircinum*, *Crataegus heireichii*, *Podocytisus caramanicus*, *Lithodora zahnii*. Besides we have found a few new species for the flora of Greece, namely, *Celtis glabrata*, *Sorbus austriaca* and *Rubus discolor*.

The listing of herbarium materials is presented in an alphabetic order by families and within families by genera, and finally within genera by species. In the list of specimens of each species we have also maintained an alphabetic order of provinces and districts, which are being quoted in abbreviated form. Numbers 1 - 782 have been collected in 1979, 783 - 1407 in 1980 and 1408 - 1768 in 1981.

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LIST OF ABBREVIATIONS ADOPTED:

Provinces:

Ipiros	— IP
Makedonia	— MA
Peloponnisos	— PE
Stereia Ellas	— ST
Thessalia	— TH
Thraki	— TR

Peninsulas:

Chalkidiki	— Cha
Kassandra	— Kas
Sithonia	— Sit
Athos	— Ath

DISTRICTS:

Aetolia-Akarnania	— At - Ak	Fokis	— Fo	Larisa	— Lr
Ahaia	— Ah	Fthiotis	— Ft	Mesinia	— Me
Alexandroupolis	— Al	Igoumenitsa	— Ig	Poligyros	— Po
Argolida	— Ag	Kavala	— Ka	Preveza	— Pr
Arkadia	— Ak	Komotini (+Xanthi)	— Ko	Serrae	— Se
Arta	— At	Korinthia	— Kr	Thessaloniki	— Th
Attiki (+Voiotia)	— Att	Kozani	— Kz	Trikala	— Tr
Drama	— Dr	Lakonia	— La		

1. ACERACEAE

1. *Acer campestre* L.

IP: Ig: thicket on slope above the road Paramythia — Morphion a little N of Kira Panagia, 1563; Pr: rare in dense road-side thicket between Thesprotikon and Pappadate, NW of Arta, 1696;

MA: Dr: Falakron Oros (Boz Dag), S of Volax, small trees on pasture grounds, 721; Ka: thicket on slope below the road between Messoropi and Domatia, 420; Kz: between Veria and Kozani, pastures and thicket near Polymylos, 1200 m alt.,

1430; Po: Cha: central part of the Cholomon Mts. between Arnea and Taxiarchis, about 1000 m alt., an edge of forest, 286; 287; S of Stratonion, between Akros Klisouri and Ierissos, 308;

TH: Lr: below Agion Dionysion at the base of Mt. Olympos, about 350 m alt., a single tree on the edge of maquis near stream, 83; Tr: Between Korydallos and Metsovon, near the road-forking to Malakasion. Clusters of trees and shrubs among pastures, 1476; TR: Al: About 3-4 km N of Nipsa, N of Alexandroupolis, the loose oak forest, 581; Thicket on slopes near the road between Xanthi and road-forking to Stavropolis and Echinios, 625.

2. *Acer heldreichii* Orph.

MA: Dr: the Rodopi Mts., rare in forest near road to "Kentriki Forest" about 2 km N of Zagradenia (N of Paranestion), 679.

3. *Acer hyrcanum* Fischer et C. Meyer

MA: Dr: the Rodopi Mts., single specimens in forest about 2 km N of Zagradenia (N of Paranestion), 1450 m alt., 681; single trees in the mixed forest about 5 km S of Zagradenia along the road to Silli (N of Paranestion), 690; Falakron Mts. (Boz Dag), slopes above Pyrgi, about 800 m alt., 737;

TH: Lr: Olympos Mt., slopes above Litochoron, about 1050 m alt., 76.

4. *Acer monspessulanum* L.

IP: Io: Below pass between Metsovon and Panagia, close to forking of the road to Milea, 1500 - 1700 m alt., on open calcareous rocks, 1740;

MA: Dr: Falakron Mts. (Boz Dag), single trees in open places in the valley of a small stream near forking of the road Drama — Kato Nevrokopion and Volax, 710; Kz: Between Veria and Kozani, SW of Georgiani, before Kastanea, about 1050 m alt., 1422; Ravine of the Beneticos river about 10 km S of Grevena, a single, weak specimen in lower part of the valley, 1462; Po: Cha: Between Paleokastron and Arnea, not far from the forking of the road toward Taxiarchis, on the edges of *Quercus frainetto* forest, 257;

PE: Ah: Only single small trees in the thicket with a large participation of *Prunus spinosa* about 3 km W of Pagrateika Kal between Patra and Tripoli, 1276; Il: Single specimens on the rocky slope on the S end of Labia village (near the road Tripoli — Patra), about 850 m alt., 1287; La: about 1 km N of Karies along the road toward Agios Petros, single, tree-like specimens in a dense scrub of *Quercus coccifera*, 964;

TH: Lr: Olympos Mt., above Litochoron, about 550 m alt., 71; Tr: Thicket among pastures between Korydallos and Metsovon not far from the road toward Malakasion, 1473; Single, tree-like specimens on slope a little E of Korydallos village (E of Metsovon), about 750 m alt., 1752; Sparse groves on slope below the road from Kastanea to forking of the road Kalabaka-Ioannina-Grevena, at about half length of the road, locally common, 1763; 1764; 1765; 1766;

TR: Al: In sparse forest 23 km N of Loutros along the road toward Pessani, 511; Loose thicket near the road Loutros — Pessani, 18 km N of Loutros, about 300 m alt., 538; In maquis on slope of the drying river about 9 km N of Makri along the road toward Sapae, 560; Ko: In the thicket on the slope of the river valley 5-6 km

NE of Nea Sanda, 597; 598; In thicket near the road about 2 km NE of Gratini toward Kallitirion, 604; Near Jerakas, the thicket on the slope above the road toward Stavropolis, 644.

5. *Acer obtusatum* Waldst. et Kit.

ST: At-Ak: Hills covered with woods among Thyriion, Voustrion and Trifos, about 400 - 600 m alt., solitary old trees, very rare, 1635;

TH: Tr: Between Korydallos and Metsovon, near road forking toward Malakasion, loose groves among pastures, 1478.

6. *Acer platanoides* L.

TH: Tr: Below pass between Metsovon and Panagia, near the road forking to Milea, 1500 - 1700 m alt., at the foot of calcareous rock, 1741.

7. *Acer pseudoplatanus* L.

MA: Dr: the Rodopi Mts.: 5 km S of Zagradenia, single trees in forest near the road to Silli (N of Paraneftion), 688; 695.

8. *Acer sempervirens* L.

PE: Ah: Rare among thicket about 8 km W of Pagrateika Kal between Patra and Tripoli, ca 600 m alt., 1280; Ag: Close thicket on edges of the fields ca 0,5 km E of Adamion, S of Epidauros, 865; Scrub on roadside slope between Adamion and Tra-



Fig. 1. Valley of the river Aliakmon near Vatolakkos NW of Grevena (Makedonia).
Phot. A. Boratyński

hia, about 400 m alt., 871; 872; 873; 874; Frequently in the thicket on slopes below the road Ano Fanari to Karatzas, 894; Ak: The roadside thicket about 14 km S of Tripoli toward Sparti, 750 - 800 m alt., 914; E end of Agios Petros, thicket on slope near road to Agois Ioanis, 850 - 900 m alt., 942; in the loose thicket and clusters of *Juniperus drupacea* E of Agios Ioanis, about 800 - 900 m alt., 948; about 8 km S of Kosmas, roadside thicket near the road to Geraki, ca 900 m alt., 1006; In scrub on the N slope near Moni Elonis, SW of Leonidi, 500 - 550 m alt., 1017; In dried stream valley between Livadaki and Toubitsi, 1258; 1259; Att: Kaloni. Tree-like specimens about 8 m tall on a roadside scarp, not far from the sea coast, 875; ca 7 km NW of Kaloni, along the way to Ano Fanari, 880; ca 10 km NW of Kaloni along the road to Ano Fanari, frequently in scrub, tree-like also, about 300 - 350 m, 888; 889; Il: In sparse forest of *Pinus halepensis* about 2 km E of Lepreo along the road toward Nea Figalia, ca 300 alt., 1222; In roadside thicket between Linaria and Louvro S of Olimpias, 1239; 1240; La: About 10 m tall trees on the N end of Karies, 958; 959; About 24 km S of the cross-road Tripoli-Sparti with the road to Agios Petros, ca 500 m alt., 979; in deep valley of dried stream about 2 - 3 km S of Agios Anargiri between Sparti and Geraki, 989; In a stream valley between Demonina and Talada, 1061; in a dried stream valley about 10 km SW of Githio, along the road toward Areopoli, 1074; Me: Tajgetos Mts., the thicket in dried small river E of Tseria, 1113; in a dried stream valley about 2 km NW of Kambos, S of Kalamata, 1134; valley of a dried stream between Risomilon and Velika, 1162; about 3 - 4 km NE of Pilos in a dried stream valley becoming a rocky gorge in upper part, 1183; in a dense thicket on the escarpment elevated above the road Gargaliani - Filiatra, near Agios Kiriaki, 1192; in roadside thicket between Kiparisia and Mouriatada, 1195.

9. *Acer tataricum* L.

TR: Al: Near Doriokos E of Alexandroupolis, very rare in thicket, 479; Ko: Near Jerakas, N of Xanthi, in thicket on slope above stream, 643.

2. ANACARDIACEAE

10. *Cotinus coggygria* Scop.

IP: At: Frequently a little N of the road forking Arta-Drosopigi and Kliston, NE of Arta, 400 - 450 m alt., 1708; on slopes between Arta and Drosopigi, S of Kato Kalendini, 1717; Ig: In the thicket 4 - 5 km S of Kira Panagia, S of Igoumenitsa, ca 250 m alt., 1569; Io: On the slopes below the road near Vustros, before the road fork to Chinka, 1510; Pr: Among dense maquis between Kastrosykia and Risa, 1558;

MA: Ko: Thasos; between Mikros Prinon and Agios Padeleimon, close to Mikros Prinon, 447; Kz: On steep slopes of the Benetikos river gorge about 10 km S of Grevena, 1455;

PE: Ak: In scrub on N slopes near Moni Elonis N of Kosmas, 500 - 550 m alt., 1016; La: in *Quercus coccifera* scrub above the road, about 20 km S of the cross-road Sparti-Tripoli and road toward Agios Petros, ca 700 alt., 979; about 10 - 13 km S of the cross-road Tripoli-Sparti and road toward Agios Petros, about 800 m, 969; ME: Tajgetos Mts., quite common on the sunny slopes of a dried stream E of Tseria, also tree-like, 1108; In a dried stream valley about 2 km NW of Kambos, 1133; Commonly on slopes covered with the scrub about 16 - 18 km NE of Kalamata along the road to Sparti, 1145;

ST: Ft: Thicket among fields on a small slope near Kato Bralos S of Lamia, 1365; In dense thicket at the base of a slope about 17 km S of Lamia, S of Leraklia, ca 400 m alt., 1371.

11. *Pistacia lentiscus* L.

IP: At: scrub a little N of the road fork Arta-Drosopigi toward Kliston, 400 - 450 m alt. 1709; Ig: on slopes above the road between Filiata and Keramitsa, 5 km SE of Xechoro 1519; about 3 - 5 km S of Igoumenitsa toward Plataria, 1531; Pr: dense scrub between Risa and Kastrosykia, 1580; scrub about 2 - 5 km N of Eklisa toward Kato Myrsini along the road to Preveza, 1579;

MA: Ath: calcareous slope between Nea Roda and Ierissos, 329; maquis about 1 - 2 km E of Ouranopolis, 341; Kas: commonly on edge of forest of *Pinus halepensis* about 1 km SE of Agios Nikolaos, 114;

PE: Ag: cluster of tree-like individuals ca 5 - 6 m in height about 3 - 4 km N of Neos Epidauros, 853; La: about 20 km S of the cross-road Tripoli-Sparti and the road toward Agios Petros, ca 700 m alt., 975; frequent in a dried stream valley between Skala and Githio, 1071; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1088;

ST: Lefaks Island: thicket on edge of an olives orchards between Vasiliki and Maradochorion, close to Vasiliki, 1606.

12. *Pistacia terebinthus* L.

IP: Io: near Lefkothea, toward Klimatia NW of Ioanina, 1506;

MA: Thasos: Close to Mikron Prinios in the direction of Agios Padeleimon, 445; Kz: solitary, old specimens on slopes of a gorge of Benetikos river about 10 km S of Grevena, 1456; Cha: between Stratonion and Olimpia, 365; maquis at the base of Keredilion Mts. N of Asprovalta, 393; Sit: maquis near Tristinika between Neos Marmaras and Koufos, 159; Polimilio gorge near Neos Marmaras, frequent, 171.

PE: Ak: Agios Petros, thicket above the road toward Agios Ioanis, about 350 - 900 m alt., 947; Kr: forest of *Pinus halepensis* about 6 km NW of Sofiko, about 300 m alt., 831; La: deep valley of a dried stream about 2 - 3 km S of Agios Anargiri between Sparti and Geraki, 988;

ST: Lefkas Island: maquis on a rocky slope above the sea shore between Agios Nikolaos and Lefkas, 1596;

TR: Al: maquis on slope of a dried stream about 9 km N of Makri toward Saqae, 553.

13. *Rhus coriaria* L.

IP: Pr: Lefkas Island: roadside slope N of Agios Nikitas toward Tsouklades, a few kilometers from the village, 1620;

MA: Ka: Thasos: It forms clusters on an open slope and on the edge of a pine forest between Potamia and Chrisi Akti, 434; 435; Dr: In thicket about 1 km E of Adriani, 647; Se: It forms a thicket 6 km N of Serrae in the direction of Orini, 762;

PE: Ak: Big cluster among thickets on slope above the road about 1 km W of Lagadia, 1268; Me: On slopes covered with scrub about 16 - 18 km NE of Kalamata along the road toward Sparti, 1144;

TH: Tr: A big cluster below the road, a little E of Korydallos, ca 750 m, 1750; 1751;

TR: Al: On edge of an olives orchard about 3 km of Makri, 489; On slope near the road between Makri and Dikella, 492; about 18 km N of Loutros along the road toward Pessani, 536; In the roadside thicket 13 km N of Makri along the road toward Sapae, 565.

3. APOCYNACEAE

14. *Nerium oleander* L.

MA: Po: Cha: on the banks of the Koutoura river near Metamorfosis, 132;

PE: La: In thicket on slope near the road about 24 km S of the cross-road Tripoli — Sparti with road toward Agios Petros, 982; It forms a thicket between Pantanasa and Elika, 1058.

4. AQUIFOLIACEAE

15. *Ilex aquifolium* L.

MA: Kz: SW of Georgiani, before Kastanea, in the brushwood of a beech forest, 1050 m alt., 1417; Po: Cha: Rare in a wet gorge between Neohorion and Stratoniki, 299; Th: Cha: Rare in a shady thicket on the slope of a small wet valley at the base of Keredilion Mts. N of Asprovalta, 387.



Fig. 2. *Juniperus excelsa* forest on Vellia Mt., slopes near Siatista (Macedonia).
Phot. A. Boratyński

5. ARALIACEAE

16. *Hedera helix* L.

IP: Io: On rocky slopes of a narrow gorge near Kastaniani about 6 km N of Dodoni along the road toward Paramythia, 1495;

MA: Dr: Falakron Mts. (Boz Dag), in thicket on slope above Pyrgi, ca 800 m alt., 749; ibidem, close to Pyrgi, 758; Pø: Cha: slope above river about 4 km N of Ierissos, 316; Kas: in thicket on the bank of a dried stream in Kalandra village, 123a; Sit: in gorge of Polimilio near Neos Marmaras, 169; Se: in a forest of *Alnus glutinosa* in the valley of a stream about 2 km N of Serrae, 782; Th: Cha: by the stream at the base of Keredilion Mts. N of Asprovalta, 394;

PE: Ah: W slopes of the Erimanthos Mts. above Kaletzi, ca 1000 m, in an *Abies cephalonica* forest, 1317; Ak: in the gorge of a dried stream valley about 3 km NW of Karies along the way to Agios Petros, 1000 m alt., 926; Il: on calcareous rocks in a narrow valley of a small stream about 2-4 km W of Tripotama, toward Patra, ca 600 m alt., 1282; La: on rocks near water in the rocky valley of the small stream about 3-4 km W of Nomia (S of Monemvasia), 1037; Me: Tajgetos Mts., on the bottom in the upper part of a valley of a dried mountain brook E. of Tseria, 1120; about 31 km NE of Kalamata, 3 km E of Artemisia, 1157;

ST: At-Ak: commonly on the rocks and old trees trunks, on slopes of hills between Thyriion, Voustrien and Trifos, 1627; Fo: common in sparse *Abies cephalonica* and *Quercus coccifera* forests on the rocky slopes near Pyrgos between Amphissa and Gravia, 1349.

6. ASCLEPIADACEAE

17. *Cionura erecta* (L.) Griseb.

MA: Po: Cha: a dense shrub not far from the road at mid distance between Stratonion and Olympia, 367; Sit: near Armenistis beach N of Sarti, 204;

PE: Ag: on edge of a close thicket of *Rubus*, *Vitex agnus-castus* and *Rosa sempervirens* near the road between Neos Epidauros and Ligurion, 855; Me: in a dried stream valley about 2 km NW of Kambos, 1135; a few clusters on an exposed slope of a deep valley of a dried stream between Lagada and Agios Nikolaos, 1103;

ST: Po: on a rocky slope above the road between Delphi and Arachova, ca 500 m alt., 1334;

TR: Ko: open places near the road about 4 km NE of Nea Sanda, 592; common on slopes near the road toward Echinon on the N end of Xanthi, 616.

18. *Gomphocarpus fruticosus* (L.) Aiton. f.

IP: Ig: sometimes common on roadside places between Kastrosykia and Risa N of Preveza, 1582.

19. *Periploca graeca* L.

MA: Po: Cha: in thicket along a dried stream at mid distance between Stratonion and Olympia, 371; Ath: in thicket of *Rubus* between Tripiti and Nea Roda, 312;

Sit: rather rare in the thicket on the bank of the stream near Tripotamos, 145; in thicket near Armenistis beach N of Sarti, 203; Se: in forest of *Alnus glutinosa* in a stream valley about 2 km N of Serrae, 779.

7. BERBERIDACEAE

20. *Berberis cretica* L.

ST: Att: Parnis Mt., in thicket on the road toward Agios Trias, 1200 m alt., 34; ibidem, on the edge of forest of *Abies cephalonica*, 1300 m alt., 49.

8. BETULACEAE

21. *Alnus glutinosa* (L.) Gaertner

MA: Dr: the Rodopi Mts.: in a stream valley ca 17 km S of Zagradenia, along the road to Silli (N of Paranestion), 700; Ka: Thasos: near Mikron Prinon, a single tree close to the stream, 453; Kz: It forms clusters close to river Benetikos in its gorge ca 10 km N of Grevena, 1460; Po: Cha: Sit: along the stream near Tripotamos, 144; 146; 147; along the stream in the upper part of Polimilio gorge near Neos Marmaras, 177; 178; 179; 180; 181; along the stream near Platanitsi N of Sarti, 208; 209; 210; 211; 212; 213; 214 215; 216; 217; 218; along a stream on the lower part of N slope of Kerasia Mt., 220; 221; 222; 223; 224; 225; 226; Se: It forms forest in a stream valley ca 2 km N of Serrae, 772;

TR: Al: in the valley of a stream 25 km N of Loutros along the road toward Pessani, 520; Ko: along the stream between Xanthi and road fork to Echinon and Stavropolis, 626; in the valley of a river 5-6 km NE of Nea Sanda, 595.

22. *Betula pendula* Roth

MA: Dr: about 7 km SW of Paranestion along the road toward Drama, only a few small trees, 652; the Rodopi Mts.: 5 km S of Zagradenia along the road to Silli (N of Paranestion), 694;

TR: Ko: only one tree on the open slope above the road Xanthi-Stavropolis near Mena Emirion, 629.

23. *Carpinus orientalis* Miller

IP: Pr: Among maquis about 2-5 km N of Eklisa in the direction of Kato Myrsini, 1575;

MA: Dr: Falakron Mts. (Boz Dag): thicket in the valley of a stream S of Volax along the road to Drama, 719; 720; Po: Cha: on the slope of a small gorge ca 5-6 km N of Stratonion along the road to Olympia, 360; common on a slope above the river ca 4 km N of Ierissos, 318; on edges of the woods near Taxiarithis, 270; Th: common in thicket in the valley of a small stream about 2 km NE of Dorkas, 1397; Cha: in the lower part of a small valley at the base of Keredilion Mts. N of Asprovalta, 403;

PE: Ah: in thicket near the cross-road S of Stavrodromi, S of Patra, ca 350 m alt., 1302; W slopes of Erimanthos Mts. near Kaletzi, on open slope, ca 900 m alt.,

1319; Il: dense thicket on an elevated slope of a dried stream valley near Vasilaki E of Olympia, 1242; single specimens on a rocky slope of the valley of the Erimanthos river between Livadaki and Vasilaki, 1256; Frequent on a rocky slope at the S end of Labia village, ca 850 m alt., 1285; 1394;

TH: Tr: It forms thicket a little E of Korydallos, ca 750 m alt., 1753;

TR: Al: in a loose forest about 23 km N of Loutros along the road toward Pessani, 510; on the slopes above a dried stream 9 km N of Makri, 561; in a loose oak forest 3-4 km E of Nipsa (N of Alexandroupolis), 578.

24. *Corylus avellana* L.

MA: Dr: the Rodopi Mts.: dense thicket ca 5 km S of Zagradenia along the road toward Silli (N of Paranestion), 683; Falakron Mts. (Boz Dag): thicket in a gorge above Pyrgi, about 800 m alt., 758;

TR: Ko: in thicket on slopes near a road N of Xanthi toward the fork to Echinus — Stavropolis, 624.

25. *Corylus colurna* L.

MA: Dr: Falakron Mts. (Boz Dag): thicket in a stream valley S of Volax toward fork of the road to Drama and Kato Nevrokopion, 718; Po: Cha: in wood between Neohorion and Stratoniki, 295.

26. *Ostrya carpinifolia* Scop.

MA: Dr: about 7 km SW of Paranestion, on slopes near the road toward Drama, 853; the Rodopi Mts.: it forms a dense thicket on the rocky slopes about 5 km S of Zagradenia near the road to Silli (N of Paranestion), 692; Falakron Mts. (Boz Dag): frequent in a devastated scrub S of Volax in the direction of road fork to Drama and Kato Nevrokopion, 717; on slopes above Pyrgi, ca 800 m alt., 732; Ka: Thasos: in sunny, open places between Potamia and Chrisi Akti, 437; Po: Cha: in a forest 5-6 km N of Stratonion, along the road to Olympia, 359; Cholomon Mts.: on edge of a forest between Arnea and Taxiarithis, ca 1000 m alt., 289; Th: in a mixed forest on the slope of a small valley at base of Keredilion Mts., N of Asprovalta, 409;

PE: Ak: close thicket on a slope 1-2 km E of Agios Petros, near the road to Agios Ioanis, 961; in a forest of *Abies cephalonica*-*Quercus ilex*-*Juniperus drupacea* about 5 km N of Kosmas, ca 850 - 900 m alt., 1014; close to Lefkohori in the direction of Lagadia, 1262; Il: thicket on the east side of the river Erimanthos between Vasilaki and Livadaki, 1247; only one old tree on calcareous rock above a dried stream on the S end of Labia village, ca 850 m alt., 1292; in a small gorge about 2 km N of Agia Triada, S of Patra, ca 400 m, 1297; La: about 1 km N of Karies in the direction of Agios Petros, 963; Me: Tajgetos Mts. E of Tseria, among a thicket on an elevated slope of the valley of a dried mountain brook, rare, 1116; 1117; in the dried stream valley about 2 km NW of Kambos, in the direction of Kalamata, 1132;

ST: Fo: single, old trees on rocks above the valley of a dried stream in a sparse forest of *Abies cephalonica* and *Quercus coccifera* near Pyrgos between Amphissa and Gravia, 1351; At-Ak: common in a rocky gorge on the slope of Kambia above Komboti village, 550 m alt., 1673;

TR: Ko: in thicket on a slope above a road N of Xanthi, before forking of the road to Echinus and Stavropolis, 619.



Fig. 3. A tree specimen of *Juniperus excelsa* M. Bieb. on Mt. Vellia near Siatista (Makedonia). Phot. A. Boratyński

9. BORAGINACEAE

27. *Lithodora zahnii* (Heldr. ex Hal.) I. M. Johnston

PE: Me: in fissures of vertical, calcareous walls of a deep valley of a dried stream between Lagada and Agios Nikolaos, 1099; 1100; Tajgetos Mts.: now and then on a rocky slope of a dried mountain brook valley E of Tseria, 1128.

10. BUXACEAE

28. *Buxus sempervirens* L.

TH: Lr: Mt. Olympos, from the Litochoron side, ca 1000 m alt., 1388; Tr: between Orthovunion and Trygon, it forms a thicket on the slopes, ca 750 m alt., 1466.

11. CAPPARIDACEAE

29. *Capparis spinosa* L. var. *inermis* Turra

PE: Kr: sunny side of rocks in a calcareous rocky gorge on SE shore of Saronikos Kolpos, ca 1,5 km SW od Korfos, 844; 845; La: on vertical rock walls of a rocky valley of a small stream about 3-4 km W of Nomia (S of Monemvasia), 1030; on the steep slope of a stream valley between Demonia and Talada, 1063;

ST: At-Ak: on the steep, rocky slope about 10 km S of Palaeros, 1638.

12. CAPRIFOLIACEAE

30. *Lonicera alpigena* L.

TH: Lr: A big cluster among the stones on Olympos Mt. from the Litochoron side, 1390;

31. *Lonicera caprifolium* L.

TH: Lr: at the base of Olympos Mt. near Agion Dionysion, 350 m alt., 82.

32. *Lonicera etrusca* Santi

IP: Io: Rare among scrubs between Dervisiana and Variades, 1705;

MA: Dr: Falakron Mts. (Boz Dag): near Pyrgi in a thicket, ca 800 m alt., 740; Ka: Thasos between Mikron Prinios and Agios Padeleimon, 446; Kz: among *Cotinus coggygria* thicket on the slope of a gorge of the Benetikos river about 10 km S of Grevena, 1464; Po: Cha: between Skala Gerakini and Poligyros, ca 420 m alt., 245; Th: at the base of Keredilion Mts. N of Asprovalta, on the slope of a narrow valley, rare, 400; in a roadside thicket about 2 km NE of Dorkas near the road Thessaloniki-Serrae, 1393;

PE: Ak: in a sparse forest of *Abies cephalonica* and *Juniperus drupacea* about 1 km E of Kosmas, 1100-1150 m alt., 1008; in a thicket on the edges of vineyards between Vlaherna and Levidi, ca 750-850 m alt., 1269; Il: in valley of a dried stream near Vasilaki E of Olympia, 1243; La: about 1 km N of Karies, devastated scrub on a slope above the road to Agios Petros, ca 900-950 m alt., 930; Me: Tajgetos Mts.: rare in the valley of the dried stream E of Tseria, 1114;

ST: Fo: in a roadside thicket S of Pyrgos along the road to Amphissa, ca 700 m alt., 1345;

TR: Al: in maquis between Makri and Dikella, 500; in a thicket on the slope of a valley of small river 5-6 km N of Loutros, 549; in maquis on the slope of dried stream valley ca 9 km N of Makri, 551.

33. *Lonicera implexa* Aiton

IP: Ig: maquis on the sea shore near Suvota SW of Igoumenitsa, very rare, 1540; dense thicket 4-5 km S of Plataria between Igoumenitsa and Karterion, 1541;

MA: Po: Cha: in *Quercus coccifera* scrub between Gerakini and Metamorfofissis, 135; between Skala Gerakini and Poligiros, 244; on a slope above the road about

4 km N of Ierissos, 317; in maquis on the seashore at mid distance between Stratonion and Olympia, 374; Ath: ca 1-2 km E of Ouranoupolis, in maquis, 350; Kas: in a thicket on the edge of a pine forest ca 2 km NW of Paliourion, 90; Sit: in maquis between Paradissos and Neos Marmaras, 153; on a small island near the sea shore in Kalamitsi, 192;

PE: Ag: in a scrub on the roadside slope between Adamion and Trahia, ca 400 m alt., 869; Il: in forest of *Pinus halepensis* on maritime dunes near Loutra, 1232; Kr: in a pine forest ca 6 km NW of Sofikon, 837; La: among a thicket on a dried slope between Liria and Eliniko near the road Monemvasia — Neapoli, 1048; among a thicket in a sunny gorge on the N of Elinikó village, 1054; in a thicket in a stream valley between Demonia and Talada, 1065; Me: in a deep valley of a dried stream between Lagada and Agios Nikolaos, 1089; on slopes covered with scrub about 16-18 km NE of Kalamata along the road to Sparti, 1146;

ST: At-Ak: rare in a thicket on slopes of hills between Voustrion, Thyriion and Triphos, 400-600 m alt., 1631; a road-side thicket about 3 km S of Ellinika toward Mesolongion, 1657; Att: Mt. Parnis: in maquis near the road to Agios Trias, ca 900 m alt., 29; Lefkas Island: in scrub on a rocky slope above the seashore between Agios Nikolaos and Lefkas, 1594; thicket on the edge of an olive orchard between Fterno and Maradochorion, 1603;

TR: Al: in a thicket on the edge of an olive orchard ca 3 km E of Makri, 490; in maquis between Makri and Dikella, 499; in a devastated scrub 18 km N of Loutros along the road to Pessani, 546; in a scrub 13 km N of Loutros along the road to Pessani, 572 a.

34. *Sambucus nigra* L.

MA: Dr: the Rodopi Mts.: a few single specimens about 5 km S of Zagradenia along the road to Silli (N of Paranestion), 682;

PE: Ah: in thickets not far from village buildings, among fields about 3 km W of Pagrateika Kal between Patra and Tripoli, 1277.

13. CELASTRACEAE

35. *Evonymus europaeus* L.

IP: Ig: thicket above the road a little N of Kira Panagia between Paramythia and Morphon, 1567;

MA: Po: Cha: between Paleokastron and Arnea, in a forest of *Quercus frainetto* near a fork of the road toward Taxiarchis, 250; Kz: in a thicket at the bottom of seasonally flowing stream valley, rare on the S side of the road Kozani — Grevena not far from the fork toward Siatista, 1442;

36. *Evonymus latifolius* (L.) Mill.

TH: TR: on exposed calcareous rocks and at the base of the rocks between Metsovon and Panagia, not far from the fork of the road toward Milea, 1733; 1734.

37. *Evonymus verrucosus* Scop.

MA: Th: thicket in the small stream valley about 2 km NE of Dorkas, between Thessaloniki and Serrae, 1398;

TR: Ko: by a stream near Mena Emirion E of Stavropolis, 631.

14. CISTACEAE

38. *Cistus incanus* L.

subsp. *incanus*

ST: Att (Voiotia): in devastated maquis about 6 km SW of Chalkis along the road to Ristona, 57;

subsp. *creticus* (L.) Heywood

MA: Dr: Falakron Mts. (Boz Dag): near the road above Pyrgi vilage, 742; Po: Cha: Kas: commonly on the edge of a pine-forest about 1 km SE of Agios Nikolaos, 115; Th: Ch: at the base of the Keredilion Mts. N of Asprovalta, 410;

TR: Al: in maquis between Makri and Dikella, 495.

39. *Cistus laurifolius* L.

TR: Al: in devastated maquis and a young pine plantation 18 km N of Loutros along the road toward Pessani, 527.

40. *Cistus monspeliensis* L.

MA: Po: Cha: on the slope above the river about 4 km N of Ierissos, 327; Kas: common on sunny clearings among forests of *Pinus halepensis* 1 km SE of Agios Nikolaos, 117;

PE: Me: on slopes about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1207;

ST: Att: (Voiotia): common in the devastated maquis between Chalkis and Ristona, 56; Lefkas Island: quite common between Drimonas and Agios Nikolaos, 1617;

41. *Cistus salvifolius* L.

MA: Po: Cha: Kas: common on clearings in forests of *Pinus halepensis* 1 km NE of Agios Nikolaos, 119.

15. COMPOSITAE

42. *Centaurea spinosa* L. subsp. *spinosa*

ST: Att: a cushion-like form on dunes by the sea near Skinias, 828;

43. *Dittrichia viscosa* (L.) Greuter

PE: Me: abundant on the roadside, ruderal places in the proximity of Kazarma between Mesina and Pilos, 1171.



Fig. 4. *Quercus macrolepis* Kotschy near Kanallakion (Ipiros). Phot. A. Boratyński

44. *Ptilostemon chamaepeuce* (L.) Less.

PE: La: on a precipitous wall of a deep valley about 2-3 km S of Agios Anargiri between Sparti and Geraki, 999; on the craggy slope of the sea shore about 2-3 km N of Gitio, 1072;

ST: Att: on calcareous rocks among the forests of *Pinus halepensis* about 4-5 km W of Marathon, 27.

16. CORNACEAE

45. *Cornus mas* L.

IP: At: in a thicket on the bank of a stream between Athamanion and Terpnas, closer to Terpnas, NE of Drosopigi, 1716; Ig: thicket above the road a little N of Kira Panagia between Paramythia and Morphon, 1566;

MA: Dr: Falakron Mts.: remnants of a thicket in a stream valley near forking of the road Drama — Kato Nevrokopion and Volax, 715; in a thicket above Pyrgi, about 800 m alt., 734; the Rodopi Mts.: a dense thicket on the rocky slope 5 km S of Zagradenia along the road toward Silli (N of Paranestion), 691; Ka: Thasos: in a dense thicket by a stream near Mikron Prinos, 455; Kz: thicket on the bottom of the gorge of a seasonally flowing stream S of the road Kozani-Grevena, near fork toward Siatista, 1439; Po: Cha: at the edge of the forest of *Quercus frainetto* between Paleokastron and Arnea, not far from the fork toward Taxiarchis, 255; in a dense thicket near the road between Stratonion and Olympia, 368; Th: in a roadside thicket about 2 km NE of Dorkas near the road Thessaloniki-Serrae, 1403; Cha: in a narrow, shady valley of a stream at the S base of Keredilion Mts., N of Asprovalta, 391;

ST: At-Ak: above Komboti village, at the upper part of a rocky gorge on Kambia slope. Numerous old specimens, 1678:

TH: Tr: in sparse groves on the slope at mid distance between Kastanea and the cross-road Kastanea — Kalabaka — Ioanina, 1757;

TR: Al: scattered in thicket 18 km N of Loutros along the road toward Pessani, 537; Ko: thicket on slopes N of Xanthi, before ramification of the road to Echinus and Stavropolis, 620; on the slopes 5-6 km NE of Nea Sanda, together with *Juniperus excelsa*, 593.

46. *Cornus sanguinea* L. (all specimens are approximaly typical, but not quite definitely of subsp. *sanguinea*)

MA: Dr: about 7 km SW of Paranestion along the road toward Drama, thicket on the slope, 652; Falakron Mts. (Boz Dag): by a stream close to Pyrgi, 755; Se: in the valley of a stream about 2 km N of Serrae, 769; 1404;

TR: Ko: in a thicket near a stream not far from Jerakas E of Stavropolis, 636.

17. CUPRESSACEAE

47. *Juniperus communis* L.

IP: Io: Pindos Mts.: below the pass between Metsovon and Panagia, not far from the road fork toward Milea, 1500 - 1700 m alt., on exposed rocks, 1749;

MA: Dr: the Rodopi Mts.: about 2 km N of Zagradenia, on edge of a forest (N of Paranestion), 678; Kz: together with *J. oxycedrus* SW of Georgiani before Kastanea, ca 1050 m alt., 1426.

48. *Juniperus drupacea* Labill.

PE: Ag: single, small-size trees among a low, close scrub about 7 km E of Ahladokambos, 900; Ak: E of Agios Petros, close to the village. Single, old trees on the slope above the road toward Agios Ioanis, 850 - 900 m alt., 946; E of Agios Ioanis in the direction of Astros, about 800 - 900 m alt., 950; 951; about 2-3 km S of Agios Petros in the direction of Kastanitsa. Slope covered with a *Juniperus drupacea* — *Abies cephalonica* forest, ca 1200 m alt., 954; about 1 km E of Kosmos, 1100 - 1150 m alt., forest of *Abies cephalonica* with participation of this juniper, 1011; about 5 km N of Kosmas, near road toward Leonidi, 850 - 950 m alt., In forest of *Abies cephalonica* — *Quercus ilex* — *Juniperus drupacea*, 1012.

49. *Juniperus excelsa* M. Bieb.

MA: Ka: Thasos: single scattered, tree-like specimens on the rocky slopes between Potamia and Chrisi Akti, 436, 438; Kz: it forms forests on slopes of Vellia Mt. E of Siatista, between Kozani and Grevena, 1432;

TH: Tr: on slopes between Kastanea and the road fork Kalabaka — Ioanina — Kastanea, 1758;

TR: Al: on a rocky hill near monastery close by Nipsa N of Alexandroupolis, 575; in a loose oak-forest 3-4 km E of Nipsa, 577; Ko: it forms forest on slopes 5-6 km NE of Nea Sanda, 594.

50. *Juniperus oxycedrus* L.

MA: Kz: on a clearing among the forest SW of Georgiani, before Kastanea, 1050 m alt., 1423; Th: Cha: tree-like specimens in maquis at the S base of Keredeilion Mts. N of Asprovalta, 413;

PE: Ak: about 3 km NW of Karies in the direction of Agrios Petros, ca 1000 m alt., 935; about 2-3 km S of Agios Petros in the direction of Kastanitsa, ca 1250 m alt., 953; 1 km E of Kosmas, 1100-1150 m alt., rare in the forest of *Abies cephalonica* and *Juniperus drupacea*, 1010; La: about 1 km N of Karies in the devastated scrub on the slope above the road to Agios Petros, ca 900-950 m alt., 924; Me: Tajetos Mts.: on slopes of a dried mountain brook valley E of Tseria, 1122;

ST: Att: Mt. Parnis, near the road to Agios Trias, about 1200 m alt., 47; Fo: on rocky slopes covered with a sparse *Abies cephalonica* forest near Pyrgos between Amphissa and Gravia, 1355;

TR: Al: scrub in a narrow valley 2,5 km W of Mesimbria (W of Makri), 502; scrub on the slope of the dried stream about 9 km N of Makri, 558; on a rocky hill near monastery in Nipsa, 574.

51. *Juniperus phoenicea* L.

IP: Ig: in maquis 3-5 km S of Igoumenitsa toward Plataria, 1533; in scrub on the seashore near Subota SW of Igoumenitsa, 1537; Pr: in thickets on seashore dunes near Risa, 1588;

MA: Po: Cha: Kas: frequently in maquis on Akros Agios Nikolaos SE of Paliouri, 106; 110; Sit: not too frequent in a scrub between Paradissos and Neos Marmaras, 148;

PE: Il: on maritime dunes near Loutra, 1233; La: in dried stream valley about 2-3 km S of Agios Anargiri between Sparti and Geraki, 995; Me: maquis on slope about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1211;

ST: Fo: common on S slopes above Korinthiacos Kolpos near Elaea between Nafpaktos and Itea, 1332.

18. EPHEDRACEAE

52. *Ephedra fragilis* Desf. subsp. *camphylopoda* (C. Meyer) Asch. et Graebner

IP: Ig: in devastated maquis on slopes near the seashore in Drepanon N of Igoumenitsa, 1528;

MA: Po: Cha: Ath: in maquis between Tripiti and Ouranoupolis, 310; E of Ouranoupolis, 336; Sit: in maquis between Paradissos and Neos Marmaras, 151;

PE: Ag: on the walls of ancient Mykene ruins, frequently, male and female specimens, 897; 898; Att: in thicket near road between Ano Fanari and Karatzas, 895; Il: only one specimen on a vertical rock on the West side of a valley of the Erimanthos river between Vasilaki and Livadaki, 1252; on rocks in a narrow valley about 2-4 km W of Tripotama, ca 600 m alt., 1284; La: in a dried stream valley about 2-3 km S of Agios Anargiri between Sparti and Geraki, 997; on a craggy slope near the seashore about 2-3 km N of Githio, 1073; Me: Tajgetos Mts.: in the valley of a dried stream E of Tseria, 1121;

ST: Fo: luxuriant specimen festooned on a rock above the road Delphi-Arachova, ca 500 m alt., 1336;

TR: Al: maquis in a narrow gorge 2,5 km W of Mesimbria, W of Makri, 509.

19. ERICACEAE

53. *Arbutus andrachne* L.

MA: Po: Cha: thicket between Skala Gerakini and Poligiros, about 2-3 km S of Poligiros, 420 m alt., 242; Ath: in maquis E of Ouranoupolis, 337; Th: Cha: maquis at the S base of Keredilion Mts. N of Asprovalta, 407;

PE: Ag: scrub on the roadside slope between Adamion and Trahia, about 400 m alt., 870; Kr: calcareous rocky gorge on the SE slope above Saronikos Kolpos ca-1,5 km SW of Korfos, 841; in a pine forest about 6 km NW of Sofiko, ca 300 m alt., 835; La: S of Tripoli, about 13 km S of the cross-road Tripoli-Sparti and road to Agios Petros, 800 m alt., 971;

ST: At-Ak: quite frequently on the slope of "Kambia" above Komboti, some specimens 5-6 m high and 20 cm in girth, 1674; Ft: dense thicket at base of S slope of Iraklia, about 17 km S of Lamia, ca 400 m alt., 1370;

TR: Al: frequently in devastated scrub 18 km N of Loutros along the road to Pesani, 543.

54. *Arbutus unedo* L.

IP: At: above the road Arta Drosopigi a little N of the road fork to Kliston, 400-450 m alt., 1707; in maquis S of Kato Kalendini between Arta and Drosopigi, 1718; Ig: dense thicket on the slope of the valley of the Akheron river near Gliki between Vouvopotamos and Paramythia, 1555; thicket above the road about 8-10 km SE of the road fork Sideri-Keramitsa to Neralda, 1526; maquis on the seashore near Subota S of Igoumenitsa, 1539; Pr: common in dense maquis between Kastroxykia and Risa, 1583; maquis about 2-5 km N of Eklisia in the direction of Kato Myrsini, 1576; maquis a little N of Pappadate in the direction of Assos, ca 300 m alt., 1702;

MA: Po: Cha: Kas: common between Paliourion and Akros Agios Nikolaos, 103; common in dense maquis on the eastern end of the Kassandra Peninsula, near Akros Agios Nikolaos, 112;

PE: Att: in scrub on the S slope of Epidaurou Kolpos shore about 10 km NW of Kaloni along the way to Ano Fanari, 300-350 m alt., 887; Il: in rudimental scrub in a small gorge near a road about 2 km N of Agia Triada, S of Patra, ca 400 m alt., 1296a; in the stream-side thicket near the cross-road Pirgos-Zaharo with



Fig. 5. A tree specimen of *Arbutus andrachne* L. on rock above Komboti village (Akarnania). Phot. A. Boratyński

the road toward Krestena, 1235; Kr: in a pine forest on a slope ca 6 km NW of Sofiko, ca 300 m alt., 833; La: about 13 km S of the cross-road Tripoli-Sparti and road toward Agios Petros, 800 m alt., 970; Me: high scrub on a slope about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1209; in scrub about 2-3 km W of Prosilio near road to Kalamata, 1131; on the edge of a forest of *Pinus nigra* 31 km NE of Kalamata, 3 km past Artemisia along the road to Sparti, 1158; in a valley of a dried stream about 3-4 km NE of Pilos, 1180;

ST: At-Ak: steep, rocky slopes about 10 km S of Palaeros in the direction of Mytikas, 1643; maquis near seashore ca 16 km S of Mytikas in the direction of Astakos, 1648; on the edge of a forest of *Quercus ilex* about 2 km W of Klivia in the direction of Embesos, ca 300 m alt., 1686; Ft: in scrub of *Quercus coccifera* on a slope above the road between Bralos and road-fork to Iti and Lamia, 1369; Lefkas Island: thickets on olive orchard edges between Fterno and Maradochion, 1602;

TR: Al: in a devastated scrub 18 km N of Loutros along the road to Pessani, 544;

55. *Bruckenthalia spiculifolia* (Salisb.) Reichb.

MA: Dr: the Rodopi Mts.: on the edge of a forest on the slope above the road to Zagradenia (N of Paranestion) 30 km N of Silli, about 900 m alt., 665.

56. *Erica arborea* L.

IP: Ig: maquis on the sea-shore near Subota SW of Igoumenitsa, 1538; dense thicket on the slope of a valley of the Akheron river not far from Glyki, between Vouvopotamos and Paramythia, 1553; Pr: maquis about 2-3 km N of Eklisia in the direction of Kato Myrsini along the road to Preveza, 1577;

PE: Ah: in *Quercus coccifera* scrub at the base of the Erimanthos Mts., near Agios Georgios (S of Patra), 1326; Ak: in roadside thicket about 14 km S of Tripoli toward Sparti, 750-800 m alt., 912; La: about 1 km N of Karies, in scrub on a slope above the road toward Agios Petros, 900-950 m alt., 923; Me: in high scrub on a slope about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1215;

ST: At-Ak: in an oak wood between Ellinika and Daphni, ca 700 m alt., 1660; Lefkas Island: scrub on a rocky slope above the seashore between Agios Nikolaos and Lefkas, 1597.

57. *Erica manipuliflora* Salisb.

IP: At: sometimes common between Arta and Drosopigi, N of the road fork Kato Kalendini — Burgaveli, as far as Kato Athamanion, 1712; Ig: dried slopes close near Igoumenitsa, in the direction of Plataria, 1529; 1530; edges of maquis 4-5 km S of Plataria, 1542; Pr: dense maquis between Kastrosykia and Risa, 1581;

MA: Po: Cha: Kas: on edges of a pine forest about 1 km NE of Agios Nikolaos, 118;

PE: Ag: common in a sparse forest of *Pinus halepensis* not far from Karnezeika, near road toward Nafplion, 896; Ak: wayside thicket about 14 km S of Tripoli toward Sparti, 750-800 m alt., 911; maquis on a slope near Moni Elonis N of Kosmas, 500-550 m alt., 1027; Att: frequently on a slope S of Ano Fanari along the road to Kaloni, 892; La: *Quercus coccifera* scrub about 20 km S of the cross-road Tripoli — Sparti and the road to Agios Petros, ca 700 m alt., 977; Me: on edge of a *Pinus nigra* forest about 31 km NE of Kalamata and 3 km past Artemisia along the road to Sparti, 1159;

ST: At-Ak: devastated scrub between Aktion and Agios Nikolaos, 1591; maquis N of Apo Kerasovo, N of Mesolongion, ca 450 m alt., 1661; about 2 km W of Kalivia village toward Embesos, 1685; Lefkas Island: thicket on olive orchard edges between Vasiliki and Maradochori, 1604.

58. *Vaccinium myrtillus* L.

MA: Dr: the Rodopi Mts.: in a pine forest on a slope about 30 km N of Silli along the road to Zagradenia (N of Paranestion), 900 m alt., 663.

59. *Vaccinium vitis-idaea* L.

MA: Dr: the Rodopi Mts.: in a pine forest on a slope about 30 km N of Silli along the road to Zagradenia (N of Paranestion), 900 m alt., 664.

20. EUPHORBIACEAE

60. *Euphorbia dendroides* L.

MA: Po: Cha: Sit: frequent on calcareous rocks above the bay of Porto Koufos, 183; 184;

PE: La: about 3-4 km W of Nomia (S of Monemvasia), narrow, rocky valley of a small stream, on the rocks, 1036; on dried slopes about 2-3 km NE of Areopoli, common, 1077; Me: on stony slopes above the road near Lagada between Areopoli and Kalamata, 400-450 m alt., 1083;

ST: At-Ak: on intensively light rock near the road about 15 km S of Mytikas toward Astakos. Some specimens up to 3 m in height, 1646.

61. *Euphorbia acanthothamnos* Heldr. et Sart.

ST: At-Ak: rare on steep, rocky, calcareous slopes about 10 km S of Palaeros toward Mytikas, 1642; on a rocky slope at the northern end of Astakos, rather rare in scrub, 1650.

21. FAGACEAE

62. *Castanea sativa* Miller

MA: Po: Cha: forest of *Quercus frainetto* near Taxiarchis, 273; in a wood between Neohorion and Stratoniki, 303; forest on a slope ca 3 km N of Stratonion along the road toward Olympia, 358;

ST: At-Ak: N of Apo Kerasovo village (N of Mesolongion), ca 450 m alt., 1664.

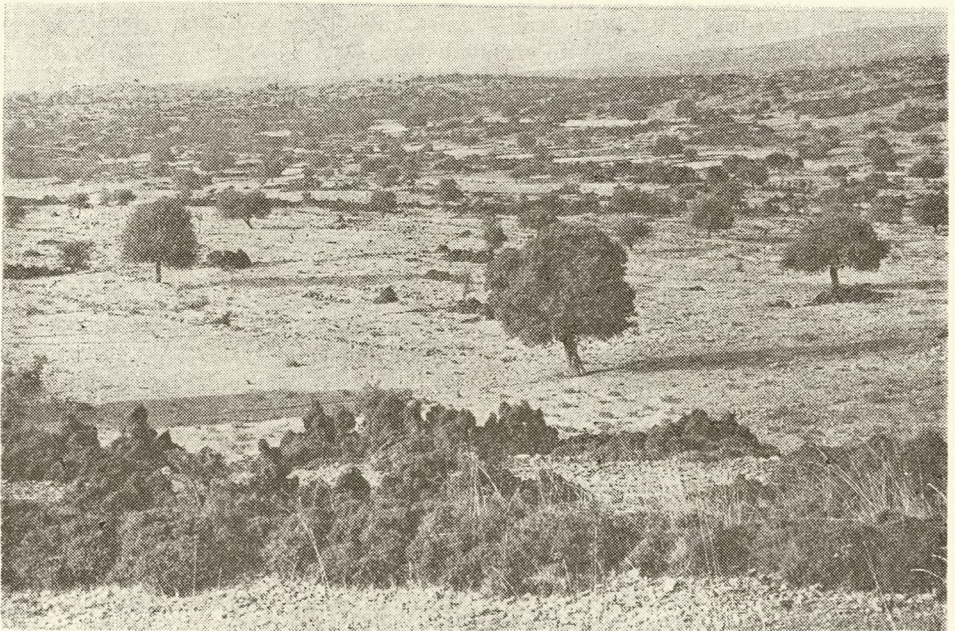


Fig. 6. Pastures with single specimens of *Pyrus spinosa* Forsskal and grazed thickets of *Quercus coccifera* L. west of Karies village (Peloponnisos). Phot. A. Boratyński

63. *Fagus sylvatica* L.

MA: Dr: the Rodopi Mts.: mixed forest near "Kentriki Forest" about 2 km N of Zagradenia (N of Paranestion), 680; Falakron Mts.: thicket above Pyrgi, ca 800 m alt., 738; Kz: SW of Georgiani before Kastanea, ca 1050 m alt., deciduous forest, 1420; Po: Cha: between Arnea and Taxiarchis, about 1000 m alt., 279; 290.

64. *Fagus* cfr. *orientalis* Lipsky

MA: Po: Cha: Cholomon Mts.: between Taxiarchis and Arnea, ca 1000 m alt., 275.

65. *Quercus cerris* L.

TR: Al: thicket on the bank of a stream about 5-6 km N of Loutros, 550; old tree in a sparse oak forest 3-4 km E of Nipsa, 584; Ko: dense thicket on a slope above the road N of Xanthi, toward the fork to Echinus and Stavropolis, 627; common near Jerakas E of Stavropolis, 645.

66. *Quercus coccifera* L.

MA: Dr: Falakron Mts. (Boz Dag): near road fork to Drama, Kato Nevrokopion and Volax, 716; Ka: near Timbano between Kavala and Xanthi, 464; Thasos: big old trees near Mikron Prinos Monastery, 441; Po: Cha: scrub on slopes above the river ca 4 km N of Ierissos, 328; Sit: rocky slopes of Kerasia Mt. above Sikea, 196;

PE: Ag: about 3-4 km S of Epidauros toward Kranidion, numerous tree-like forms together with the shrubby ones among fields, 861; Ah: at the base of Erimanthos Mts. near Agios Georgios, group of old trees 10 m tall W of the village, 1324; La: deep valley of a dried stream about 2-3 km S of Agios Anargiri between Sparti and Geraki, 992; Me: dried stream valley about 2 km NW of Kambos S of Kalamata, 1141; between Gargaliani and Filiatra, near Agios Kiriaki, trees up to 5-6 m in height among scrub on an elevated slope, 1193;

TR: Ko: about 2 km NE of Gratini toward Kallitirion, in scrub, 605.

67. *Quercus frainetto* Ten.

MA: Dr: Falakron Mts. (Boz Dag): thicket above Pyrgi, 741; Po: Cha: it forms large forests between Paleohorion and Arnea near the road fork to Taxiarchis, 262; 263; 264; in a mixed forest ca 3 km N of Taxiarchis, 266; Th: Cha: at the base of Keredilion Mts. N of Asprovalta, 395;

PE: Ah: group of old trees together with *Quercus pubescens* among pasture grounds about 6 km W of Pagrateika Kal, between Patra and Tripoli, 1279; Ak: in roadside thicket about 14 km S of Tripoli toward Sparti, 915; sparse oak woods about 3 km NW of Karies along the road to Agios Petros, ca 1000 m alt., 934; between Agios Petros and Karies, sparse oak woods with *Erica arborea* brushwood, 968; group of old, huge trees S of Livadaki not far from a road, 1257;

ST: At-Ak: oak woods N of Apo Kerasovo village N of Mesolongion, 1662; Fo: near Pyrgos between Amphissa and Gravia, rocky slopes covered with sparse forests of *Abies cephalonica* and *Quercus frainetto*, 750-850 m alt., 1356;

TR: Al: in a thicket near Dorikos, E of Alexandroupolis, 480; 481; it forms loose, not large forests about 18 km N of Loutros along the road to Pessani, ca 300 m alt., 540; Ko: thicket on slopes above the road N of Xanthi, before road fork toward Echinus and Stavropolis, 628.

68. *Quercus ilex* L.

IP: Ig: about 3-5 km S of Igoumenitsa toward Plataria, 1532; maquis on a rocky slope between Morphion and Mesopotamion, closer to Morphion, 1548; Pr: dense maquis between Risa and Kastrosykia, N of Preveza, 1586;

MA: Ka: Thasos: near Potamia, along the way to Chrisi Akti, 430; Po: Cha: slopes above the river ca 4 km N of Ierissos, 315; in a thicket between Stratonion and Olympia, on the edge of a beach, 373; Sit: maquis between Paradissos and Neos Marmaras, 152; in maquis on the southern tip of the Sithonia Peninsula, near Ambelos E of Koufos, 190; 191; on the southern, rocky slope of Kerasia Mt. above Sikea, 197; Kerasia Mt., a little below the top, 231; Th: Cha: at the base of Keredilion Mts. N of Asprovalta, 401;

PE: Ak: scrub on N slope near Moni Elonis N of Kosmas, 500-550 m alt., 1018; Att: scrub on S slopes ca 10 km N of Kaloni toward Ano Fanari, ca 300-350 m alt., 884; 885; Il: a rudimental scrub between Nea Figalia and Petralona, ca 650 m alt., 1226; La: deep, sun-heated gorge on the northern end of Eliniko, 1050; Me: Tajgetos Mts.: in the valley of a dried stream E of Tseria, 1110; 1119; in a dried stream valley about 2 km NW of Kambos, S of Kalamata, 1139; on slopes covered with a scrub about 16-18 km NE of Kalamata along the road to Sparti, 1147; in a rudimental scrub near Kazarma between Mesini and Pilos, 1169;

ST: At-Ak: in maquis on slopes of hills between Thyrion, Voustrion and Trifos, 400-600 m alt., 1632; maquis in a gorge on the slope of "Kambia" above Komboti village, 1672; Att: Parnis Mt., about 1300 m alt., single specimens in the forest of *Abies cephalonica*, 48; Lefkas Island: in maquis on a rocky slope above the seashore between Agios Nikolaos and Lefkas, 1598;

TH: Lr: in the northern part of "Tempe" valley (valley of the Pinios river), S of Purgetos, 70.

69. *Quercus macrolepis* Kotschy

IP: Ig: on slopes covered with forests of *Quercus coccifera* and *Q. macrolepis* at mid distance between Vrosina and Keramitsa, 1513;

PE: La: now and then on slopes S of Eliniko, 1055; on slopes about 10 km NW of Molai along the road to Sparti, 1068; single trees S of Tsikalía, S of Areopoli, 1078; Me: groups of not too big but fruiting trees N of Gargaliani, 1188;

ST: At-Ak: about 4-5 km S of Palaeros, 1636; solitary, old trees on pasture grounds with the remains of maquis between Babini and Aetos, 1669; Fo: single trees on the pasture grounds on the slope N of Glaxidion along the road to Itea, 1333;

TH: Lr: between Plateon and Larisa Kresmeste, single trees among fields, 60; between Rizomylos and Neon Peribolion, among fields, 64;

TR: Al: between Therma and Anthia, among fields, 477; in maquis between Makri and Dikella, single trees, 493; 496; about 9 km N of Makri along the road to Sapae, 567; it forms forests about 13 km N of Makri along the road to Sapae, 567; loose oak forests 3-4 km E of Nipsa, numerous old specimens, 579; 580; Ko: frequent among the fields around Jasmós, 474; 475.

70. *Quercus petraea* (Mattuschka) Liebl.

MA: Dr: Falakron Mts. (Boz. Dag): on slopes above Pyrgi village, ca 800 m alt., 746; Po: Cha: Cholomon Mts., between Arnea and Taxiarchis, ca 1000 m alt., 281;



Fig. 7. A tree specimen of *Acer sempervirens* L. near Karies village (Peloponnisos).
Phot. A. Boratyński

TR: Al: 23 km N of Loutros along the road toward Pessani, 516; 18 km N of Loutros along the road toward Pessani, ca 300 m alt., 539.

71. *Quercus pubescens* Willd.

MA: Ka: near Mikro Timbano between Kavala and Xanthi, 465; Thasos: between Potamia and Chresi Akti, 432; close to Mikron Piros along the road toward Agios Pandeileimon, 451; Po: Cha: in wood between Paleokastron and Arnea, not far from the road fork to Taxiarchis, 261; S of Stratonion, between Akros Klisouri and Ierissos, 309; slopes above the river 4 km N of Ierissos, 314; in forest 3 km N of Stratonion along the road to Olympia, 355; Ath: 2 km E of Ouranoupolis, 339; Kas: about 1 km E of Siviri toward Kassandria, 131; Th: Cha: at the base of Keredilion Mts. N of Asprovalta, 405;

PE: Ah: groups of trees among the pastures about 6 km W of Pagrateika Kal, 1278; S of Stavrodromi, ca 350 m alt., 1304; Ak: roadside thicket about 14 km S of Tripoli toward Sparti, 750 - 800 m alt., 916; in loose thicket of *Quercus coccifera* about 11 km S of Tripoli in the direction of Sparti, 750 - 800 m alt., 907; Il: single specimen between Nea Figalia and Petralona, ca 650 m alt., 1225; Me: on stony slope above the road Areopoli — Kalamata near Lagada, 1982; in a rudimental scrub close to Kazarma between Mesini and Pilos, 1166; 1167; single specimens on the slope between Mouriatada and Kiparisia, 1202;

ST: At-Ak: solitary, old deformed trees on slopes of hills between Thyrion, Vourtrion and Trifos, 400 - 600 m alt., 1643; solitary trees in remnants of maquis among pasture grounds between Babinion and Aetos, 1667; between Florida and Chrisor-

rahi, ca 450 m alt., 1690; Ft: thicket among fields on a small slope near Kato Bralos S of Lamia, 1360;

TR: Al: about 13 km N of Makri along the road to Sapae, 566.

72. *Quercus trojana* Webb

IP: Io: near road Ioanina-Igoumenitsa, about 5 km W of the road fork to Chin-ka, 1512;

MA: Kz: solitary trees on slope of a gorge on the southern side of the road Kozani-Grevena, not far from the road fork to Siatista, 1437; very rare in a juniper forest on the S slope of Vellia Mt. E of Siatista, 1446; about 10 km S of Grevena on the slopes of a gorge of the Benetikos river, scattered here and there 1453; 1457; 1459; 1463.

73. *Quercus pubescens* Willd. \times *Q. petraea* (Mattuschka) Lieblein

MA: Dr: Falakron Mts. (Boz Dag): S of Volax toward the cross-road Drama — Kato Nevrokopion, in open places with scattered trees and shrubs, 723.

22. GLOBULARIACEAE

74. *Globularia alypum* L.

MA: Po: Cha: 2 km E of Metamorfofosis, 136; about 2-3 km S of Poligiros along the road to Skala Gerakinis, ca 420 m alt., 243;

PE: Kr: rocky, calcareous gorge on the SE slope of the Saronikos Kolpos shore about 1.5 km SE of Korfos, 850; La: S of Tripoli, about 13 km S of the cross-road Tripoli — Sparti and the road toward Agios Petros, ca 800 m alt., 973; about 20 km S of the cross-road Tripoli — Sparti with the road to Agios Petros, ca 700 m alt., 974; in a dried stream valley 2-3 km S of Agios Anargiri between Sparti and Geraki, 994; in scrub about 3-4 km S of Monemvasia, near Agios Kiriaki, 1031; thicket on a dried slope between Liria and Eliniko, 1044; Me: in deep valley of a dried stream between Lagade and Agios Nikolaos, 1091a; in a dried stream valley about 2 km NW of Kambos S of Kalamata, 1138; among scrub on a slope about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1213;

ST: Att (Voiotia): 2-3 km SW of Chalkis, 51; about 6 km SW of Chalkis along the road to Ristona, frequently in devastated scrub, 58.

23. GROSSULARIACEAE

75. *Ribes uva-crispa* L.

PE: Ah: Erimanthos Mts.: above Kaletzi on rocks among forest of *Abies cephalonica* with *Quercus coccifera* brushwood, very rare, 1000-1200 m alt., 1311; 1312; above Kaletzi, 900-1000 m alt., 1316.

24. GUTTIFERAE

76. *Hypericum empetrifolium* Willd.

MA: Po: Cha: Kas: between Paliourion and Akros Agios Nikolaos, 98;

PE: Ak: in scrub on slopes near Moni Elonis N of Kosmas, 500 - 550 m alt., 1024; Att: about 7 km N of Kaloni along the road to Ano Fanari, 881; Kr: in pine forest ca 6 km NW of Sofiko, 834; La: S of Tripoli, about 13 km S of the cross-road Sparti — Tripoli and the road to Agios Petros, ca 800 m alt., 972; on rocks about 3 - 4 km W of Nomia (S of Monemvasia), 1042; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1092; on slopes covered with maquis about 16 - 18 km NE of Kalamata along the road Sparti, 1148;

ST: Att: on the edges of a forest of *Pinus halepensis* about 4 - 5 km W of Marathon, 26; Parnis Mt., 600 m alt., near the road to Agios Trias, 43; Ft: dense thicket at the foot of a slope S of Ieraklia, about 17 km S of Lamia, ca 400 m alt., 1372; Lefkas Island: rare in a sparse scrub on a high slope above the road Agios Nikolaos — Tsouklades, a few kilometers N of Agios Nikitas, 1621;

77. *Hypericum hircinum* L.

PE: La: rare in a narrow, rocky valley of a small stream about 3 - 4 km W of Nomia (S of Monemvasia), 1032; 1033; on gravel heaps and places covered with stones in a stream valley between Pantanasa and Elika N of Neapoli, 1056; stream valley between Demonia and Talada, 1059.

25. LABIATAE

78. *Coridothymus capitatus* (L.) Reichb. f.

IP: Ig: in scrub in the vicinity of Elea N of Igoumenitsa, 1525; scrub on slopes above the seashore near Subota SW of Igoumenitsa, 1536; on exposed slopes of the valley of the Akheron river near Gliki between Vouvopotamos and Paramythia, 1560;

MA: Po: Cha: Ath: on calcareous rocks between Nea Roda and Ierissos, 333;

PE: Kr: on calcareous rocks above the shore of Saronikos Kolpos ca 1.5 km SE of Korfos, 864;

ST: At-Ak: scrub on slopes above the seashore about 9 km S of Mytikas, toward Astakos, 1645; Att (Voiotia): frequent in destroyed scrub in the vicinity of Chalkis.

79. *Lavandula stoechas* L.

MA: Po: Cha: Sit: frequent in degraded maquis between Metamorfossis and Metokhion, 142; W shore of the Sithonia peninsula NW of Destenika, 162; dried, sunny slopes around Platanitsa N of Sarti, 198;

PE: La: in thicket on dried slopes between Liria and Eliniko, 1046;

ST: At-Ak: in scrub about 16 km S of Mytikas toward Astakos, 1647.

80. *Phlomis fruticosa* L.

PE: Ag: in a dried stream valley E of Ligurion, 860; Ah: W slopes of Erimanthos Mts. above Kaletzi, 900 - 1000 m alt., 1318; Ak: E of Agios Petros, in thicket above

the road toward Agios Ioanis, ca 850-900 m alt., 945; Kr: on the rocky slope of Saronikos Kolpos shore ca 1.5 km S of Korfos, 843.

81. *Prasium majus* L.

MA: Po: Cha: Kas: near Kapsochora, above the road to Paliourion, 87; in maquis 1-2 km E of Paliourion, 93; Sit: on calcareous rocks above the bay of Porto Koufos, 185; maquis near Tristinika, 161;

ST: Att: (Voiotia): in maquis on calcareous rocks near Topolia, 21; 22.

82. *Rosmarinus officinalis* L.

MA: Po: Cha: Ath: rare, in sunny places about 1-2 km E of Ouranoupolis, 338;

ST: Att: (Voiotia): devastated scrub between Chalkis and Ritsona, 55.

83. *Salvia pomifera* L.

PE: Att: S of Ano Fanari toward Kaloni, in scrub on rocks near the road, 890; Kr: in a calcareous rocky gorge on the shore of Saronikos Kolpos ca 1,5 km S of Korfos, 842; La: deep valley of a dried stream 2-3 km S of Agios Anargiri between Sparti and Geraki, 991; between Demonina and Talada, 1067;

ST: Att: Parnis Mt., near the road toward Agios Trias, ca 600 m alt., 42.

84. *Salvia triloba* L. f.

PE: Ak: in scrub on a slope near Moni Elonis N of Kosmas, 500-550 m alt., 1023; Me: deep valley of a stream between Lagada and Agios Nikolaos, 1097; Tajgetos Mts.: valley of a dried stream E of Tseria, 1107.

85. *Satureja thymbra* L.

PE: Ak: roadside thicket about 14 km S of Tripoli along the road to Sparti, 750-800 m alt., 918; La: dried stream valley about 2-3 km S of Agios Anargiri, between Sparti and Geraki, 996; Me: dried stream valley about 2 km NW of Kambos, S of Kalamata, 1143; maquis about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1212;

ST: Att: on the edge of a forest of *Pinus halepensis* ca 4-5 km W of Marathon, 24; Parnis Mt., at the base of a mountain from the Atina side, 52.

86. *Thymbra spicata* L.

ST: Ft: thicket among fields on a small slope near Kato Bralos S of Lamia, 1362.

26. LAURACEAE

87. *Laurus nobilis* L.

IP: Ig: on the slopes above the road 5 km SE of Xechoro between Filiatae and Keramitsa, 1521; maquis on a rocky slope between Morphion and Mesopotamion (closer to Morphion), 1551; dense maquis on slopes of a small gorge SE of

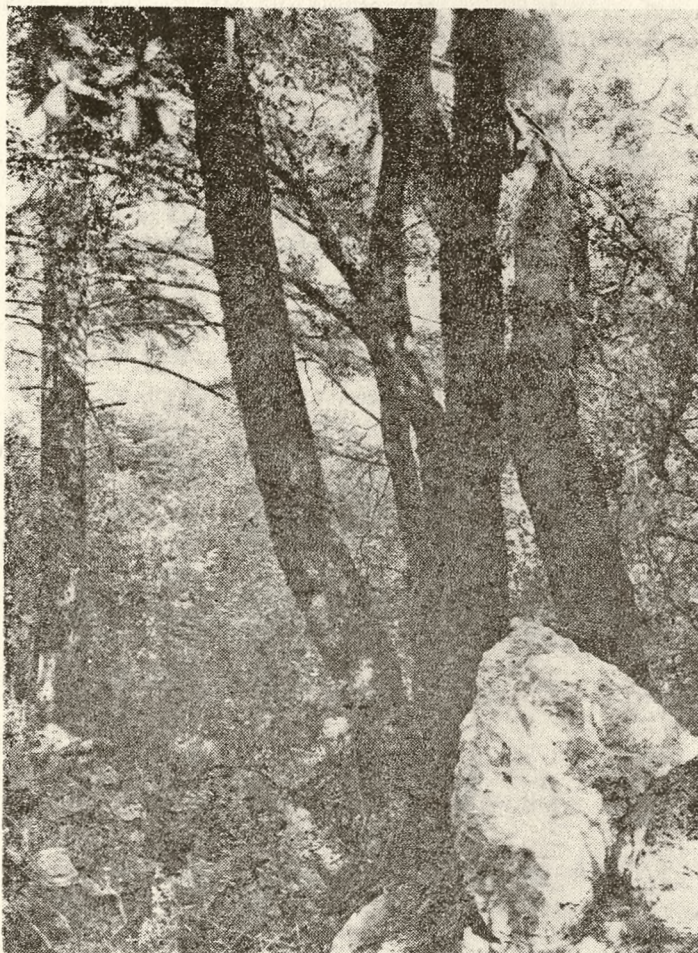


Fig. 8. Inside a *Quercus ilex* — *Abies cephalonica*, forest near Elonis, north of Kosmas (Peloponnisos). Phot. A. Boratyński

Morphion, not far from Tzara, 1570; Pr: thicket near the road between Thesprotikon and Pappadate, NW of Arta, 1695;

PE: Ak: about 5 km N of Kosmas along the road to Leonidi, ca 850-900 m alt., *Abies cephalonica-Quercus ilex-Juniperus drupacea* wood on a northern slope, 1013; in scrub on a slope near Moni Elonis N of Kosmas, 500-550 m alt., 1015; Il: rare in a dense thicket on a rocky slope of a valley of a dried stream near Vasilaki E of Olympia, 1244; about 2-4 km W of Tripotama in the direction of Patra, the rocky, narrow valley of a small stream, about 600 m alt., 1281; Kr: in pine forest ca 6 km NW of Sofiko, ca 300 m alt., 832; deep valley of a dried stream between Lagada and Agios Nikolaos, 1095; rare in a rocky gorge of a dried stream valley about 3-4 km NE of Pilos, 1181; on the bank of a small stream on the N edge of Kiparisia, 1203; Tajgetos Mts.: on an elevated, rocky slope of a dried river valley E of Tseria, 1115;

ST: Lefkas Island: common in thickets in olive orchards between Maradohorion and Vasiliki, 1605.

27. LEGUMINOSAE

88. *Adenocarpus complicatus* (L.) Gay

MA: Ka: between Avli and Akros Union W of Kavala, 427; Po: Cha: between Neohorion and Stratoniki, in sunny places on edges of forests, 297; open place near the road 5-6 km N of Stratonion, toward Olympia, 362; Kas: on the edge of a pine forest near a road, 2 km NW of Paliourion, 88; Sit: Polimilio gorge near Neos Marmaras, 167; on slopes of Kerasia Mt., in destroyed maquis, 288.

89. *Anagyris foetida* L.

TR: Al: edges of an olive orchard 2,5 km W of Mesimbria, W of Makri, 506; on the slope of a dried stream valley ca 9 km N of Makri along the road to Sapae, 552; Makri, near the northern end of a village, 589.

90. *Anthylis hermanniae* L.

IP: Ig: scrub 3-5 km S of Igoumenitsa toward Plataria, 1535; in scrub near the road fork Sideri — Neralda — Keramitsa, not far from Elea, 1523;

MA: Po: Cha: about 2 km E of Metamorfossis, 138; commonly between Stratonion and Olympia, 375; Ath: sunny places ca 1-2 km E of Ouranoupolis, 343; Kas: in open places at the top of Akros Agios Nikolaos SE of Paliourion, 107; Sit: frequently on the upper parts of Kerasia Mt., 230; Polimilio gorge near Neos Marmaras, 176; on the S slopes of Kerasia Mt., above Sikea, 195; Th: Cha: at the base of the Keredilion Mts. N of Asprovalta, 406;

PE: Ak: scrub on the N slope near Moni Elonis N of Kosmas, 1019; Il: on edge of a forest in a stream valley about 2 km E of Lepreo in the direction of Nea Figalia, ca 300 m alt., 1220; roadside thicket about 3 km N of Agia Triada, S of Patra, 1298; La: scrub of *Quercus coccifera* ca 20 km S of the cross-road Tripoli-Sparti and road to Agios Petros, ca 700 m alt., 976; on rocks in the valley of a small stream about 3-4 km W of Nomia (S of Monemvasia), 1035; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1093;

ST: At-Ak: on hills between Thyriion, Voustrion and Trifos, common all around, 1626; Lefkas Island: in thicket on the edge of an olive orchard between Maradohorion and Vasiliki, 1609;

TH: Lr: in scrub between Agios Georgios and Mikrothivae, 17;

TR: Al: 2,5 km W of Mesimbria, W of Makri, 506; on a slope about 9 km N of Makri along the road to Sapae, 555; 3-4 km NE of Nipsa, 586; Ko: ca 2 km E of Gratini along the road to Kallitirion, 603.

91. *Calicotome villosa* (Poiret) Link

MA: Po: Cha: Ath: on a calcareous slope between Nea Roda and Ierissos, 331; maquis ca 1-2 km E of Ouranoupolis, 347;

PE: La: at base of rocks in a narrow valley of a stream about 3-4 km W of Nomia (S of Monemvasia), 1045;

ST: Lefkas Island: on the E shore near Vlichon, toward Katochorion, 1599;

TH: Lr: frequently in a loose thicket between Agios Georgios and Mikrothivae, 16.

92. *Ceratonia siliqua* L.

PE: La: ca 7 km N of Kaloni toward Ano Fanari, ca 170 m alt., 878; Kr: rocky and stony slopes above Saronikos Kolpos about 1.5 km SW of Korfos, 851; single trees among grasses and devastated scrub near the cross-road Sparti — Geraki and Kosmas — Vrodamas, ca 350 m alt., 1000; stream valley between Demonina and Talada, 1064; single trees among scrub on a dried slope between Tsikalia and Alika S of Areopoli, 1079;

ST: At-Ak: single specimens on slope above the sea about 4-5 km S of Palaeros, 1637; Lefkas Island: rare between Fterno and Maradochorion, 1600.

93. *Cercis siliquastrum* L.

MA: Ka: Thasos: a single, old tree close to Mikron Prinos towards Agios Pandeimon, 449; Po: Cha: near a dried stream between Stratonion and Olympia, 369; Ath: maquis about 1-2 km E of Ouranoupolis, 346; Sit: maquis between Paradissos and Neos Marmaras, 150;

PE: La: thicket on slope above the road about 24 km S of the cross-road Tripoli—Sparti and the road to Agios Petros, ca 500 m alt., 983; deep valley of a dried stream about 2-3 km S of Agios Anargiri between Sparti and Geraki, 985; Me: Tajgetos Mts.: frequent in the upper part of a valley of a dried stream E of Tseria, 1111;

ST: At-Ak: steep, rocky slopes about 10 km S of Palaeros in the direction of Mytikas, 1640; Ft: thicket among fields on a small slope near Kato Bralos, 1363; Lefkas Island: craggy slope below the road between Agios Petros and Hortata, 1613.

94. *Chamaecytisus albus* (Hacq.) Rothm.

MA: Po: Cha: common on sunny places between Neohorion and Stratoniki, 293; 294; 296;

TR: Al: in open places on edges of the forests, rare, about 18 km N of Loutros along the road to Pessani, form with yellow flowers, ca 300 m alt., 522; 524.

95. *Chamaecytisus hirsutus* (L.) Link

IP: Io: at base of calcareous rocks E of Metsovon, E of the pass across the Pindos Mts., 1500-1550 m alt., 1483; 1727;

MA: Th: Cha: in a small valley of a stream at the base of Keredilion Mts. N of Asprovalta, 396;

TH: Lr: Olympos Mt., slopes above Litochoron, ca 1050 m alt., 73;

TR: Al: destroyed maquis and young pine plantation about 18 km N of Loutros, along the road to Pessani, 532; 533;

96. *Chamaecytisus subidaeus* (Gand.) Rothm.

PE: La: deep, sun-heated gorge on the northern end of Eliniki village, not too frequent, 1051; 1052; 1053 (recently considered as Cretean endemic).

97. *Chamaecytisus supinus* (L.) Link

MA: Th: Cha: on the bottom of a small stream valley at the base of Keredilion Mts. N of Asprovalta, 416.

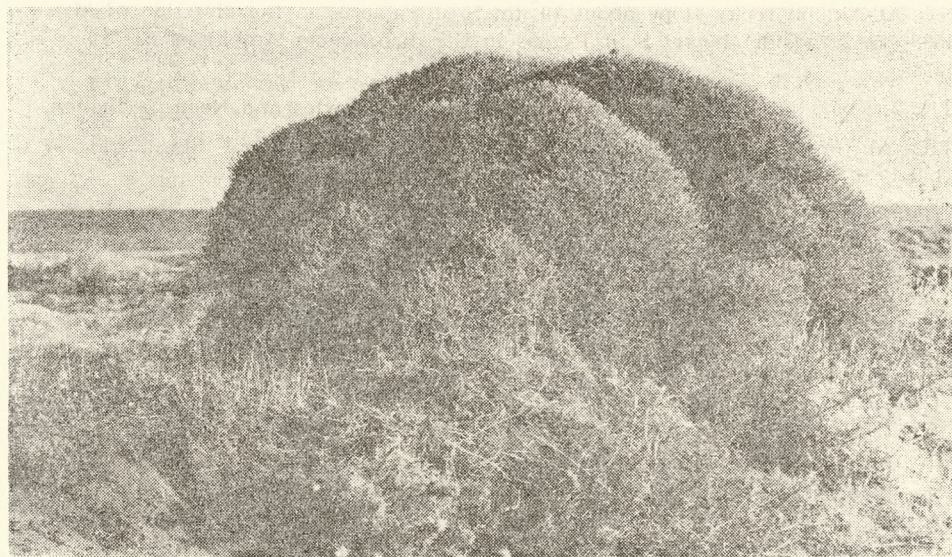


Fig. 9. *Centaurea spinosa* L. subsp. *spinosa* on beach near Skinias (Attiki). Phot. A. Boratyński

98. *Colutea arborescens* L.

MA: Dr: Falakron Mts. (Boz Dag): in thicket above Pyrgi, ca 800 m alt., 735; Po: Cha: Kas: among fields ca 2,5 km SE of Paliourion, 113; Th: Cha: valley of a small stream at the base of Keredilion Mts. N of Asprovalta, 414;

PE: Il: thicket on a rocky slope on the S end of Labia village between Tripoli and Patra, ca 850 m alt., 1293; La: scrub on a slope about 1 km N of Karies, along the road to Agios Petros, ca 900 - 950 m alt., 931;

TR: Al: on the slope of a dried stream valley about 9 km N of Makri along the road to Sapae, 554.

99. *Coronilla emerus* L. subsp. *emeroides* (Boiss. et Spruner) Hayek

IP: Io: locally frequent on rocky slopes of a small gorge near Kastaniani, ca 6 km N of Dodoni, 1498; below the pass between Metsovon and Panagia, near road fork toward Milea, 1500 - 1700 m alt., 1745;

MA: Dr: Falakron (Boz Dag): in a thicket on the slope of a stream valley N of Prosotsani, 729; in a thicket above Pyrgi, 800 m alt., 730; Po: Cha: Ath: on calcareous rocks between Nea Roda and Ierissos, 334; in maquis 1-2 km E of Ouranoupolis, 344; Kas: in a thicket on Akros Agios Nikolaos SE of Paliourion, 108; Sit: thicket in Poliomilio gorge near Neos Marmaras, 170; Th: Cha: on the slope of a valey at the base of Keredilion Mts., N of Asprovalta, 408;

PE: Il: valley of a dried stream near Vasilaki E of Olympia, 1241; in a thicket of *Carpinus orientalis* on the southern end of Labia, 1291; La: thicket on a slope above the road toward Agios Petros about 1 km beyond Karies, 832; deep valley of a stream about 2-3 km S of Agios Anargiri between Sparti and Geraki, 986; valley of a stream between Démonia and Talada, 1066; Me: thicket on the slope of a deep valley of a dried stream between Lagada and Agios Nikolaos, 1104;

ST: At-Ak: on rocky slope about 10 km S of Palaeros in the direction of Mytikas, 1639; Fo: roadside thicket S of Pyrgos in the direction of Amphissa, ca 700 m alt., 1338;

TH: Lr: rare on rocks above the road between Rizomylos and Neon Peribolion, 67;

TR: Al: on slope of a narrow valley about 2,5 km W of Mesimbria, W of Makri, 507.

100. *Coronilla valentina* L. subsp. *glauca* (L.) Battand.

ST: Att: Parnis Mt., thicket near the road to Agios Trias, 600 m alt., 45.

101. *Cytisus villosus* Pourret

IP: Pr: on slopes close to Assos between Assos and Dervisiana, 400 m alt., 1703;

MA: Po: Cha: open places near a road toward Olympia ca 3 km N of Stratonion, 356; open, sunny places near the road Stratonion — Olympia, at mid distance, 379;

ST: At-Ak: abundant on slopes near Daphni N of Mesolongion, ca 500 m alt., 1659; between Chrisorahi and Florida, ca 450 m alt., 1689.

102. *Dorycnium hirsutum* (L.) Ser.

MA: Po: Cha: Ath: on calcareous slopes between Nea Roda and Ierissos, 332; Sit: on elevated shore by the sea about 2 km E of Metamorfossis, 137; 140; Th: Cha: at base of Keredilion Mts., N of Asprovalta, 417;

PE: Me: Tajgetos Mts.: thicket in a valley of a dried stream E of Tseria, 1129;

ST: Ft: thicket among the fields on a small slope near Kato Braios, 1361.

103. *Genista acanthoclada* DC.

MA: Po: Cha: Sit: in a thiny forest of *Pinus halepensis* on an elevated shore by the sea about 2 km E of Metamorphossis, 139;

PE: Ag: about 3-4 km S of Epidauros, scrub near road to Kranidion, 862; La: scrub on a slope above the road to Agios Petros about 1 km from Karies, 925;

ST: Att: common on edges of forests of *Pinus halepensis* about 4-6 km W of Marathon, 23.

104. *Genista carinalis* Griseb.

MA: Dr: Falakron Mts. (Boz Dag): at the base of the mountains in the vicinity of Pyrgi; Ka: between Avli and Akros Union W of Kavala, 428; Po: Cha: sunny roadside places between Paleokastron and Arnea, near by the road fork to Taxiarchis, 260; Sit: at the upper parts of Kerasia Mt., 229; Th: on edge of a scrub of *Quercus coccifera* between Kalokastron and Lachanas, 10; 11.

TR: Al: open places on edges of forests near the road to Pessani 18 km N of Loutros, 300 m alt., 535; Ko: open places on a slope covered with forests of *Pinus halepensis* at the northern end of Xanthi, 613.

105. *Genista lydia* Boiss.

MA: Dr: about 7 km SW of Paranestion, sunny slope near the road to Drama, 654; the Rodopi Mts: rare on open places near a road about 2 km N of Zagradenia (N of Paranestion), ca 1500 m alt., 677; Po: Cha: Cholomon Mts.: open places near by the top of a mountain between Arnea and Taxiarchis, ca 1000 m alt., 285;

TR: Ko: commonly N of Xanthi along the road to the forking to Echinós and Stavropolis, 617.

106. *Genista tinctoria* L.

MA: Po: Cha: on slope of a watery gorge between Neohorion and Stratoniki, 300;

TR: Al: on the edge of an oak forest 18 km N of Loutros along the road to Pessani, ca 300 m alt., 531.

107. *Podocytisus caramanicus* Boiss. et Heldr.

MA: Kz: thicket near a road on the edges of neglected vineyards not far from Siatista between Kozani and Grevena, 1435;

ST: Ft: big clusters among neglected vineyards about 1 km N of Kato Bralos, 1367.

108. *Spartium junceum* L.

MA: Po: Cha: Ath: maquis about 1 - 2 km E of Ouranoupolis, 342.

109. *Teline monspessulana* (L.) K. Koch

IP: At: on edge of a thicket on roadside slopes ca 5 km N of Malatae between Arta and Drosopigi, ca 200 - 300 m alt., 1710; N of the road fork Kato Kalendini — Burgaveli from the road Arta — Drosopigi, as far as Kato Athamanion, 1711;

MA: Po: Cha: sunny places near the road Stratonion — Olympia, at the mid distance 366; Th: at the base of Keredilion Mts. N of Asprovalta, 411;

PE: Me: on edge of a forest of *Pinus nigra* about 31 km NE of Kalamata, 3 km past Artemisia along the road to Sparti, ca 1100 m alt., 1160.

28. LILIACEAE

110. *Asparagus acutifolius* L.

MA: Ka: open places among *Quercus coccifera* scrub between Podohorion and Mesorope, 421;

PE: La: among devastated scrub about 2 km N of Geraki near the road to Kosmas, 1001;

ST: Fo: common in a scrub on the west side of the Greek National Road in Thermopylai, 827.

111. *Ruscus aculeatus* L.

IP: Io: deep valley of a small river N of the road Ioanina — Igoumenitsa near the road to Despotiko, 1507;

MA: Po: Cha: in a watery gorge between Neohorion and Stratoniki, 302;



Fig. 10. Degraded slopes northwest of Tirnavos (Larisa). In front single specimens of *Paliurus spina-christi* Miller. Phot. A. Boratyński

PE: Ak: loose thicket of *Quercus coccifera* about 11 km S of Tripiti toward Sparti, 750-800 m alt., 910; Il: forest of *Pinus halepensis* in the valley of a stream about 2 km E of Lepreo toward Nea Figalia, ca 300 m alt., 1224; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1102; stony slope above the road Areopoli — Kalamata near Lagada, 1084.

112. *Smilax aspera* L.

IP: Ig: road-side scrub near Xechoro between Keramitsa and Filiata, 1518; in maquis 4-5 km S of Plataria between Igoumenitsa and Karterion, 1543; Pr: in dense maquis between Kastrosykia and Risa, 1548;

MA: Po: Cha: Kas: near Skala Fourkas about 1,5 km from Kalandra, 121; thicket on slopes of a dried stream in Kalandra village, 130; Sit: near Tristinika, 156;

PE: Ag: thicket on the bank of a stream at mid distance between Neos Epidauros and Ligurion, 858; Att: about 7 km N of Kaloni along the road to Ano Fanari, 882; Il: forest of *Pinus halepensis* on the bank of a stream about 2 km N of Lepreo in the direction of Nea Figalia, ca 300 m alt., 1223; Kr: in a pine-forest on a slope above a road ca 6 km NW of Sofiko, about 300 m alt., 838; La: deep valley of a dried stream about 2-3 km S of Agios Anargiri between Sparti and Geraki, 990; 998; thicket of *Nerium oleander* on the bank of a dried stream about 3-4 km E of Makrinara between Skala and Molai, 1030; stream valley, between Demonina and Molai, 1062; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1105; rudimental scrub in a dried stream valley between Risomylos and

Velika, SW of Mesini, 1164; valley of a dried stream about 3-4 km NE of Pilos, 1177;

ST: Fo: scrub on the west side of the Greek National Road in Thermopylai, 826.

113. *Smilax excelsa* L.

MA: Po: Cha: in maquis on a slope above a river ca 4 km N of Ierissos, 325.

29. LORANTHACEAE

114. *Arceuthobium oxycedri* (DC.) M. Bieb.

MA: Dr: Falakron (Boz Dag): frequently on *Juniperus oxycedrus* S of Volax toward the cross-road Drama — Kato Nevrokopion, 724; thicket on a slope in the vicinity of Pyrgi, ca 800 m alt., 752; Kz: on a number of juniper specimens SW of Georgianni between Veria and Kozani, 1050 m alt., 1424;

ST: Fo: on a slope, in a forest of *Abies cephalonica* near Pyrgos between Amphissa and Gravia, on *Juniperus oxycedrus*, 750 - 850 m alt., 1354; 1357;

TR: Ko: rare on *Juniperus oxycedrus* near Kallitirion E of Komotini, 609.

115. *Loranthus europaeus* L.

IP: Io: on *Quercus macrolepis* between Vrasina and Keramitsa, 1514;

MA: Po: Cha: on *Quercus pubescens* and *Castanea sativa* about 3 km N of Stratonion along the road to Olympia, 354;

PE: Ak: on *Quercus pubescens* about 2 km W of Agios Petros, ca 1000 - 1050 m alt., 938;

ST: At-Ak: on *Quercus frainetto* N of Apo Kerasovo N of Mesolongion, ca 450 m alt., 1663.

116. *Viscum album* L.

subsp. *abietis* (Wiesb.) Abrom.

PE: Ah: on *Abies cephalonica* on the western slopes of Erimanthos Mts., above Kaletzi, ca 1200 m alt., 1320; Ak: on firs about 1 km E of Kosmas, 1100 - 1150 m alt., 1007;

ST: Att: Parnis Mt., frequently on *Abies cephalonica*, near the road to Agios Trias, ca 1200 m alt., 36.

— subsp. *austriacum* (Wiesb.) Vollm.

TH: Lr: Olympos, slopes above Litochoron, on *Pinus nigra*, ca 1050 m alt., 72 a..

30. MORACEAE

117. *Ficus carica* L. var. *riparum* Hausskn.

MA: Po: Cha: Sit: bank of a small river near Tripotamos, 143.

118. *Morus nigra* L.

MA: Ka: Thasos: Miron Prinos, tree planted not far from the road to Agios Pandeimon, 457.

31. MYRTACEAE

119. *Myrtus communis* L.

IP: Ig: abundant in maquis near the road fork to Sideri, Neralda and Keramitsa, not far from Elea, 1522; about 8-10 km SE of the road fork Sideri—Keramitsa—Neralda toward Neralda, 1527; dense thicket on the slope of the Akheron river valley not far from Glyki, between Vouvopotamos and Paramythia, 1554; Pr: thicket on seashore dunes near Risa, 1587;

MA: Ka: Thasos: in maquis between Potamia and Chrisi Akti, 431; on the edge of a pine forest about 5 km W of Thasos, 461; Po: Cha: Kas: about 1 km S of Paliourion, 92; on rocks above the seashore on the SE tip of the peninsula, about 1 km SE of Akros Nikolaos, rare, 116; Sit: beach at the base of Melitonas Mt. S of Neos Marmaras, 165; near Ambelos E of Koufos, 187; on the E slope of Kerasia Mt., only one shrub on the bank of a stream, 232; on a slope above the river about 4 km N of Ierissos, 323;

PE: Ah: roadside thicket past Vasilikon in the direction of Patra, 1328; Att: thicket of *Vitex angus-castus* and *Nerium oleander* in dried stream valley between Ano Fanari and Karatzas, 893; Il: maritime dunes near Loutra; specimens are being covered with sand, 1229; small clusters among the roadside thicket about 3 km N of Agia Triada between Patra and Tripoli, 1299; La: *Nerium oleander* thicket on the bank of a dried stream about 2-3 km E of Makrinara, between Skala and Molai, 1029; near water in a narrow valley of a stream about 3-4 km W of Nomia, 1034; gorge on the N end of Eliniko village, 1049; stream valley between Demonia and Talada, 1060; about 10 km NW of Molai along the road to Sparti, 1069; valley of a dried stream between Skala and Githio, 1070; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1094; dried stream valley about 2 km NW of Kambos, 1136; 1140; edge of a scrub near the cross-road Mesini — Pilos and Kokino, 1168; thicket in a dried stream valley about 3-4 km NE of Pilos, 1182; dense thicket on an elevated slope above the road Gargaliani — Filiatra not far from Agios Kiriaki, 1190; roadside thicket between Kiparisia and Mouriatada, 1196; in maquis about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1205;

ST: At-Ak: scrub between Aktion and Agios Nikolaos, 1589; 1590; in a wood of *Quercus ilex* W of Kalivia village towards Embesos, E of the road Amfilochia—Arta, ca 300 m alt., 1684.

32. OLEACEAE

120. *Fraxinus angustifolia* Vahl.

MA: Cha: on a river bank about 4 km N of Ierissos, 319; about 1 km N of Olympia along the road to Stavros, 380; Se: between Mesorope and Domatia, only one tree not far from the road, 424;

ST: At-Ak: ash-elm forest between Astakos and Neochorion, a little N of Les-sinion, 1651;

TH: Tr: thicket among pastures near a dried stream a little SE of Kastanea, W of the road fork Kalabaka — Ioanina — Grevena, 1755;

TR: Al: single trees along a small river 25 km N of Loutros toward Pessani, 519;

Ko: river valley 5 - 6 km NE of Nea Sanda, 599.

121. *Fraxinus ornus* L.

IP: Ig: thicket on a rocky slope between Morphion and Mesopotamion, closer to Morphion, 1550;

MA: Dr: the Rodopi Mts.: thicket on a rocky ridge near the road Silli—Zagradenia, about 5 km S of Zagradenia, 685; Thasos: thicket close to Mikron Prinos toward Agios Pandeileimon, 452; Kz: thicket on the slope of the Benetikos river gorge about 10 km SW of Grevena, 1461; Po: Cha: single specimens on a stream bank near Taxiarchis village, 269; slope above a river about 4 km N of Ierissos, 320; edge of a forest about 3 km N of Stratonion along the road to Olympia, 357; Sit: upper part of Polimilio gorge near Neos Marmaras, 172; E slopes of Kerasia Mt., by a stream, 227; Th: thicket in a small stream valley about 2 km NE of Dorkas, 1399; Cha: slope of a small valley at the base of Keredilion Mts. N of Asprovalta, 402;

PE: Ak: Agios Petros, near village above the road to Agios Ioanis, ca 850 - 900 m alt., 943; scrub on a slope near Moni Elonis N of Kosmas, 500 - 550 m alt., 1021; small tree in a dried stream valley between Livadaki and Toubitsi, 1261; Il: Labia, S end of the village, small trees in a thicket on a rocky slope, ca 850 m alt., 1288; Me: Tajgetos Mts.: sparse on an elevated slope of a dried stream E of Tseria, 1112; slope covered with a scrub about 16 - 18 km NE of Kalamata along the road to Sparti, 1145;

ST: Fo: rocky slope covered with a sparse forest of *Abies cephalonica* near Pyrgos between Amphissa and Gravia, 1350; Ft: Thermopylai, a close thicket on the western side of the Greek National Road, 823;

TR: Al: devastated scrub about 18 km N of Loutros along the road to Pessani, 541.

122. *Jasminum fruticans* L.

MA: Dr: thicket on S side of the road Drama—Paranestion about 1 km E of Adriani, 646; Falakron Mts. (Boz Dag): by a stream close to Pyrgi, 757; Kz: S side of the road Kozani-Grevena, not far from the road fork to Siatista, bottom of the gorge of a small, seasonally flowing stream, up to 2 m tall shrubs, frequently grazed, 1438; Se: thicket in a valley of a small river about 2 km N of Serrae, 764;

TR: Al: rare in *Quercus coccifera* scrub about 2 - 3 km W of Pherae, 483; maquis between Makri and Dikella, 497; Ko: thicket on banks about 2 km E of Xanthi, 469; in *Quercus coccifera* scrub near Kallitirion, 607.

123. *Ligustrum vulgare* L.

IP: Ig: thicket above the road a little N of Kira Panagia between Paramythia and Morphion, 1565; Io: rare on rocky slopes of a small gorge near Kastaniani about 6 km N of Dodoni, 1496; Pr: dense thicket near the road between Thesprotikon and Pappadate, ca 100 m alt., 1697;



Fig. 11. „Kentriki Forest” north of Zagradenia (NE Makedonia) — fragment of an *Abies alba* — *Fagus sylvatica* forest. Phot. K. Jakusz

MA: Dr: about 7 km SW of Paranestion along the road to Drama, 655; Falakrón Mts. (Boz Dag): by a stream close to Pyrgi, 759; Se: valley of a small river about 2 km N of Serrae, 776; Th: thicket on slope of a small stream valley about 2 km NE of Dorkas, 1396;

PE: Ah: thicket S of Stavrodromi, ca 350 m alt., 1306; Erimanthos Mts.: scrub of *Quercus coccifera* near Agios Georgios, 1323;

TR: Al: thicket in a valley of a small river 5-6 km N of Loutros, 547; Ko: between Xanthi and the road fork Echinis and Stavropolis, 621.

124. *Olea europaea* L. var. *sylvestris* Brot.

MA: Sit: in maquis near Ambelos, E of Koufos, 188; 189.

125. *Phillyrea latifolia* L.

IP: At: in maquis S of Kato Kalendini between Arta and Drosopigi, 1719; Io: in maquis on the pasture edges near Kastaniani, 6 km N of Dodoni, 1492; high shrubs close to a small deep gorge of a stream not far from Despotikon, 1508; Pr: in maquis about 2-5 km N of Eklisia toward Kato Myrsini along the road to Preveza, 1578;

MA: Thasos: common on rocky slopes above the sea near Skala Maries, 440; Kz: in juniper thicket on the S slope of Velia Mt. E of Siatista between Kozani and Grevena, rare, only grazed down specimens, 1433; Po: Cha: thicket 3 km N of Olympia along the road to Stavros, 382; Ath: scrub about 1-2 km E of Ouranoupolis, 353; Th: common in scrub not far from the road to Thessaloniki ca 5 km SW of Kalokastron, 822;

PE: Ah: Erimanthos Mts.: single specimens on open slopes near Kaletzi, 1322; Il: in forest of *Pinus halepensis* in the valley of a stream about 2 km past Lepreo in the direction of Nea Figalia, 1216; rocky, narrow valley of a small stream about 2-4 km W of Tripotama along the road to Patra, 1283; Klr: in a pine forest, ca 6 km NW of Sofiko, about 300 m alt., 836; calcareous, rocky gorge about 1,5 km SW of Korfos, 840; La: dried slopes between Liria and Eliniko near the road Monemvasia-Neapoli, 1047, Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1096; dried stream valley about 2 km NW of Kambos, S of Kalamata, 1137;

ST: At-Ak: between Babinion and Aetos, toward Katuna, 1666; quite numerous among a thicket in the upper part of the gorge on the slope of „Kambia” above Komboti village, 1681; Fo: roadside thicket S of Pyrgos near the road to Amphissa, ca 700 m alt., 1341; Lefkas Island: in maquis on a rocky slope above the sea between Agios Nikolaos and Lefkas, 1593;

TH: Lr: Mt. Olympos, commonly in maquis near Agion Dionision above Litochoron, ca 350 m alt., 84; Tr: slope below the middle part of the road from Kastanea to the road fork Kalabaka—Ioanina—Grevena, 1761;

TR: Al: devastated scrub about 13 km N of Loutros, along the road toward Pessani, 573.

126. *Syringa vulgaris* L.

MA: Dr: Falakron Mts. (Boz Dag): in fissures of sheer rocky slopes of a valley of a small stream near Pyrgi, ca 800 m alt., 739.

33. PINACEAE

127. *Abies cephalonica* Loudon

PE: Ak: about 3 km NW of Karies along the road to Agios Petros, single trees in an oak wood, about 1000 m alt., frequently higher 928; about 2-3 km S of Agios Petros along the road to Kastanitsa, 1250-1300 m alt., 955; 956; Me: Tajgetos Mts.: it forms wide woods on elevated slopes E of Tseria 1127;

ST: Att: Parnis Mt.: along the road to Agios Trias, about 1200 m alt., 35.

128. *Pinus halepensis* Miller

MA: Thasos: forest near Alyki, 439; Sit: it forms forests near Platanoitsa N of Sarti, 199.

129. *Pinus heldreichii* Christ

IP: Io: below the pass E of Metsovon, pine forest on calcareous rocks, ca 1500 - 1550 m alt., 1485.

130. *Pinus pinea* L.

MA: Po: Cha: Sit: single trees in pine forests near Platanitsa N of Sarti, 200; 201.

131. *Pinus sylvestris* L.

MA: Dr: the Rodopi Mts.: about 5 km S of Zagradenia along the road to Silli, 693.

34. PLATANACEAE

132. *Platanus orientalis* L.

MA: Po: Cha: on a river bank about 4 km N of Ierissos, 324; common on the bank of the Kountoura river near a road from Kassandra to Sithonia, 133; Se: in the valley of a stream about 2 km of Serrae, 773; Th: Cha: stream valley at the base of Keredilion Mts. N of Asprovalta, 415.

35. RANUNCULACEAE

133. *Clematis cirrhosa* L.

MA: Po: Cha: Kas: in a thicket about 4 km SE of Paliourion along the road to Akros Agios Nikolaos, 99;

PE: La: in thicket on the slope of a narrow, rocky valley of a small stream 3-4 km W of Nomia S of Monemvasia, 1041;

ST: Att: in forest of *Pinus halepensis* about 4-5 km W of Marathon, 25.

134. *Clematis flammula* L.

IP: Ig: in dense scrub on slopes of a small gorge near the road about 3-5 km SE of Morphion, in the vicinity of Tzara, 1573;

MA: Kz: vicinity of the road fork Kozani — Grevena — Siatista, in thicket among the pastures, 1436; Kas: in thicket between Paliourion and Akros Agios Nikolaos, 96; Sit: in maquis near Tristinika between Neos Marmaras and Koufos, 158; Th: in thicket near the road between Kefalochorion and Evangelistria, 14;

PE: Ag: in thicket in a dried stream valley E of Ligurion, 859; Ak: in scrub of *Quercus coccifera* between Levidi and Vlaherna, 1273; La: dry slopes above the road about 10 km SW of Githio along the road to Areopoli, 1075;

ST: Fo: in roadside thicket S of Pyrgos, toward Amphissa, 1339; Ft: in thicket on the edges of vineyards about 1 km N of Kato Bralos in the direction of Lamia, 1368;

TR: Al: in maquis on the slope of a dried stream about 9 km N of Makri along the road to Sapae, 557.

135. *Clematis vitalba* L.

IP: Io: below the pass between Metsovon and Panagia, near the road fork to Melea, on calcareous rocks 1742;

MA: Po: Cha: Kas: in thicket on slopes of a dried stream valley in Kalandra, 125; Sit: about 1 km S of Sarti, 207;

PE: Ak: Parnon Mts.: Agios Petros, in thicket on slopes above the road to Agios Ioanis, ca 900 m alt., 937;

TR: Al: on edge of maquis about 2.5 km W of Mesimbria, W of Makri, 508.

36. RHAMNACEAE

136. *Frangula rupestris* (Scop.) Schur

MA: Dr: the Rodopi Mts.: rare in a thicket on a slope about 35-40 km S of Zagradenia along the road to Silli, N of Paranestion, 704;

TH: Lr: Mt. Olympos, among rocks near a stream from the Litochoron side, ca 1100 m alt., 1389.

137. *Rhamnus alaternus* L.

IP: Ig: slopes above the road Filiata—Keramitsa 5 km NE of Xechoro, 1520; in maquis on slopes between Morphion and Mesopotamion, closer to Morphion, 1549; in maquis on high slopes above the Akheron river near Glyki between Vouvopotamos and Paramythia, 1559; in dense maquis near Tzara about 3-5 km SE of Morphion, 1572;

MA: Po: Cha: Ath: calcareous rocks between Nea Roda and Ierissos, 330; in maquis about 1-2 km E of Ouranoupolis, 351; Kas: thicket about 4 km SE of Paliourion along the road to Akros Agios Nikolaos, 104, 105; thicket near Skala Fourkas not far from Kalandra 120; on the bank of a dried stream in Kalandra, 123; Sit: devastated scrub between Paradissos and Neos Marmaras, 149;

PE: Ak: slope on E bank of Erimanthos river between Vasilaki and Livadaki, 1249; Att: scrub on the S slope about 10 km NW of Kaloni along the road to Ano Fanari, 300-350 m alt., 886; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1091; in maquis on the slopes about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1214; 1210; edge of a scrub near the cross-road Mesini—Pilos with the road to Kokino, 1170; 1172; dried stream valley N of Hora along the road to Pirgos 1187; dense thicket on an elevated slope above the road between Gargaliani and Filiatra, not far from Agios Kiriaki 1194; Tajetos Mts., on slopes of a dried stream valley E of Tseria, 1124;

ST: At-Ak: rare on steep, rocky slopes about 10 km S of Palaeros toward Mytikas, 1642a; Lefkas Island: in maquis on a rocky slope above the sea between Agios

Nikolaos and Lefkas, 1595; on the edges of olive orchards between Maradochorion and Vasiliki, 1607;

TH: Lr: calcareous rocks above the National Road between Rizomylos and Neon Peribolion, 65.

138. *Rhamnus alpinus* L.

subsp. *fallax* (Boiss.) Maire et Petitm.

IP: Io: Pindos Mts.: open calcareous rocks below the pass between Metsovon and Panagia, not far from the road fork to Milea, 1500-1700 m alt., 1732, 1735, 1736;

TH: Lr: Mt. Olympos: rocks on edge of a forest of *Pinus nigra* above the road to a shelter house below the top of the mountain, 1200-1300 m alt., 1387.

139. *Rhamnus lycioides* L.

subsp. *graecus* (Boiss. et Reuter) Tutin

PE: Ag: scrub 2-3 km W of Mili along the road to Tripoli, 899; Lefkohori, thicket on an abrupt slope above the road to Lagadia, 1267; scrub of *Quercus coccifera* between Levidi and Vlaherna, 750-850 m alt., 1275; Att: thicket about 7 km NW of Kaloni along the road to Ano Fanari, 877; Kr: calcareous, rocky gorge 1.5 km SW of Korfos, 848, 849, 849a; La: about 1 km N of Karies, scrub on a slope above the road to Agios Petros, 900-950 m alt., 936; on rocks about 3-4 km W of Nomia S of Monemvasia, 1043; dried slopes above the road, ca 10 km SW of Githio in the direction of Areopoli, 1076; dried, stony slopes ca 3 km N of Itilo, 1080; stony slopes above the road near Lagada, 400-500 m alt., 1087; Tajgetos Mts.: on slopes of a dried stream valley E of Tseria, 1123;

ST: At-Ak: a few specimens on the slope between Luotrakion and Trifos, 1623; rare on the steep, rocky slopes 10 km S of Palaeros, toward Mytikas, 1641; in the gorge on the slope of „Kambia” above Komboti, 500 m alt., 1679; Att (Voiotia): calcareous rocks near Topolia, 19; Fo: Thermopylai, thicket on the rocky slopes, 825; S of Pyrgos along the road toward Amphissa, ca 700 m alt., 1346; Lefkas Island: on the rocks of craggy slopes above the road between Agios Petros and Hortata, rare, 1611; 1612.

140. *Rhamnus rhodopeus* Velen.

IP: Ig: rocky slopes of a narrow gorge near Kastaniani about 6 km N of Dodoni, rare, 1497;

MA: Dr: thicket 1 km E of Adriani between Drama and Paranestion, 648; Kz: frequent in thickets among fields near the road fork to Kozani, Grevena and Siatista 1440; Th: roadside thicket about 2 km NE of Dorkas, 1394;

TR: Al: scrub of *Quercus coccifera* 2-3 km W of Pherae, rare 484; Ko: Xanthi, edge of a pine forest near the road to Echinus, 614.

36. ROSACEAE

141. *Amelanchier ovalis* Medicus

IP: Io: exposed calcareous rocks below the pass E of Metsovon, 1500-1550 m alt., 1482;

MA: Po: Cha: Cholomon Mts.: rare on calcareous rocks between Arnea and Taxiarchis, 100 m alt., 280.

142. *Amygdalus webbii* Spach

IP: Io: thicket near Rodotopion about 7 km NW of Ioanina, 1502; Pr: between Kastriion and Kanallakion, on slopes below the road, 1574;

MA: Kz: in juniper scrub on the S slopes of Vellia Mountain E of Siatista, 1448; Po: Cha: Sit: a few specimens on a slope above a road at the northern end of Koufos village, 164;

PE: Kr: a few high clusters on a rocky slope 1,5 km SW of Korfos, 839; Me: stony slope above the road near Lagada, 1086; scrub on slopes between Rodia and Mouriatada, 1201;

ST: Lefkas Island: on craggy slopes between Agios Petros and Hortata, rare, 1614;

TH: Lr: calcareous rocks above the road between Rizomylos and Neon Peribolion, very rare, 63; dried slopes between Vrisia and Farsala, 1380.

143. *Cerasus avium* (L.) Moench

MA: Dr: Rodopi Mts.: about 25 km S of Zagradenia along the road to Silli, slope of a river valley, 703.

144. *Cerasus mahaleb* Miller

IP: Pr: edge of a scrub a little N of Pappadatae along the road to Assos, 1700;

PE: Ak: in thicket on slope below the road past Lefkohori toward Lagadia, rare, 1263;

TH: Tr: thickets and groves on a slope below the road between Kastanea and the road fork Kalabaka — Ioanina — Kastanea, 1762.

145. *Cotoneaster intergerrimus* Medicus

IP: Io: calcareous rocks below the pass between Metsovon and Panagia near the road fork toward Milea, 1700 m alt., 1730.

146. *Cotoneaster nebrodensis* (Guss.) C. Koch.

MA: Dr: the Rodopi Mts.: 5 km of Zagradenia along the road to Silli, rocky slope above the road, rare, 697.

147. *Crataegus heldreichii* Boiss.

MA: Dr: Falakron Mts. (Boz Dag): S of Volax toward the cross-road Drama — Kato Nevrokopion, rare in open places, 725; Thicket near Pyrgi, ca 800 m alt., 751;

PE: Ag: roadside thicket 0,5 km E of Adamion, S of Epidauros, 864; 866; Ah: Erimanthos Mts.: slopes above Kaletzi, 1000 - 1200 m alt., 1309; ibidem, 900 m alt., 1321; Ak: ca 11 km S of Tripoli along the road to Sparti, 905; ibidem, 750 - 800 m alt., 906; 906a; in woods of *Quercus frainetto* about 3 km NW of Karies along the road to Agios Petros, 1000 m alt., 933; very thin thicket with clusters of *Juniperus drupacea* E of Agios Ioanis along the road to Astros, 800 - 900 m alt., 949; dense

thicket near the road to Agios Petros about 2 km E of the road Tripoli — Sparti, 957; thicket among single trees of *Juniperus drupacea* E of Agios Ioanis, 967; about 8 km S of Kosmas, thicket near the road to Geraki, ca 900 m alt., 1003; about 1 km E of Kosmas, in forest of *Abies cephalonica* — *Juniperus drupacea*, 1009; Il: rudimental scrub between Nea Figalia and Petralona, ca 650 m alt., 1227; 1228; Me: Tajgetos Mts.: upper of a dried stream E of Tseria, rare, 1118; 3 km NE of Artemisia near the road Kalamata — Sparti, frequent on clearings of a forest of *Pinus nigra*, 1150; 1151; 1152; 1153; Kiparisias Mts.: thicket above Rodia, ca 400 m alt., 1199;

ST: At-Ak: in sparse thicket on hill between Thyriion, Voustrion and Trifos, 400 - 600 m alt., rather rare, 1625; Att: Parnis Mt.: edge of a forest of *Abies cephalonica* near road to Agios Trias, ca 1200 m alt., 38; 39; Fo: rocky slope near Pyrgos between Amphissa and Gravia, 750 - 850 m alt., 1348; 1353; Ft: about 20 km N of Lamia along the road to Larisa in *Quercus coccifera* scrub, ca 600 m alt., 1377;

TH: Tr: between Korydallos and Metsovon, near the road fork to Malakasion, thicket among pastures, 1474.

148. *Crataegus monogyna* Jacq.

IP: Ig close to Paramythia in the NW direction, 1561; Io: N of Metsovon near the road-cross Kalabaka — Ioanina — Millea, pastures, 1486; a few kilometers E of Metsovon, 1726; about 7 km NW of Ioanina, near Rodotopion, 1499;

MA: Ka: near Mikro Timbano between Kavalla and Xanthi, 466; Thasos: Mikron Prinon, thicket near road to Agios Pandleimon, 458; Kz: thicket and pastures near Polymylos, ca 1200 m alt., 1428; 1430a; Po: Cha: S of Stratonion, 307; slope above a river ca 4 km N of Ierissos, 313; 321; Ath: single shrubs near the path 1 - 2 km E of Ouranoupolis, 349; Kas: thicket on edge of a pine forest ca 2 km NW of Paliourion, 89; thicket 4 km SE of Paliourion along the road to Akros Agios Nikolaos, 101; thicket near Skala Fourkas, 122; Sit: Southern, rocky slopes above Sikea, 194; thicket near Armenistis Beach N of Sarti, 234; 237; 238; Th: roadside thicket about 2 km NE of Dorkas, 1401;

PE: Ah: thicket near the cross-road S of Stavrodromi, ca 350 m alt., 1301; Ak: *Quercus coccifera* scrub about 11 km S of Tripoli along the road to Sparti, ca 750 - 800 m alt., 906; 909; roadside thicket 14 km S of Tripoli, 750 - 800 m alt., 917; about 2 km E of the road Tripoli — Sparti, along the road to Agios Petros, ca 800 m alt., 921; about 8 km S of Kosmas along the road to Geraki, ca 900 m alt., 1002; Lefkohori, thicket on an abrupt slope below the road to Lagadia, 1266; Il: thicket on bank of a stream near the cross-road Pargos — Zaharo with the road to Krestena, 1233; thicket on an elevated slope of a dried stream valley near Vasilaki, 1246; thicket on a slope on the western bank of the Erimanthos river between Vasilaki and Livadaki, 1250; Labia, thicket on a rocky slope below the road toward Patra, ca 850 m alt., 1286; La: thicket above the road Tripoli — Sparti about 24 km S of the road fork to Agios Petros, 980; Me: dried stream valley about 2 km NW of Kambos, 1142; rudimental scrub near Kazarma between Mesini and Pilos, 1165; edge of a scrub close to the cross-road Mesini — Pilos — Kokino, 1174; thicket in a dried stream valley about 3 - 4 km NE of Pilos, 1179; Tajgetos Mts.: 3 km E of Artemisia along the road to Sparti, 1161; thicket E of Mouriatada, near the village, 1196;

ST: At-Ak: thicket and pastures on hills between Thyriion, Voustrion and Trifos, ca 400 - 600 m alt., 1629; E of Floriada in the direction of Petra, 1693; Fo: forest of *Abies cephalonica* on rocky slopes near Pyrgos between Amphissa and Gravia,

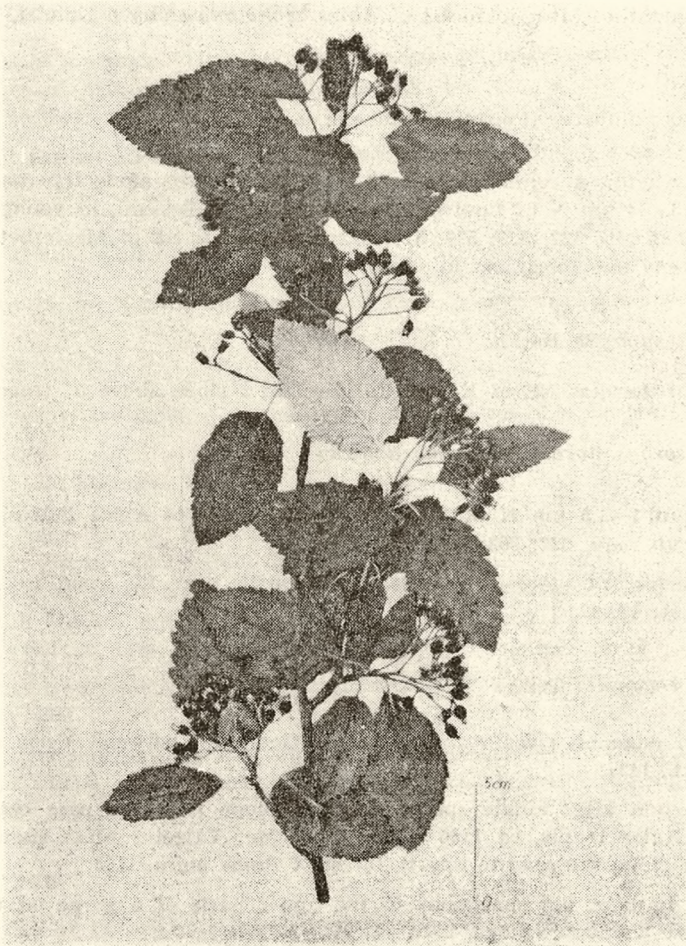


Fig. 12. *Sorbus austriaca* (G. Beck) Hedlund. A herbarium specimen collected in NE Makedonia in the Rodopi Mts. ca 19 km S of Zagradenia, above the road to Silli. Phot. K. Jakusz

750-850 m alt., 1352; Ft: in scrub of *Quercus coccifera* about 20 km N of Lamia along the road to Larisa, ca 600 m alt., 1378; Lefkas Island: thicket on steep, landslide slopes — below the road Agios Petros — Hortata, 1615;

TH: Lr: dried, quite bare slopes between Vrisia and Farsala, 1381;

TR: Al: 23 km N of Loutros along the road to Pessani, 513; thicket 18 km N of Loutros, 545; thicket 13 km N of Makri along the road to Sapae, 563; 564; ca 8 km N of Loutros along the road to Pessani, thicket near the road, 569; Ko: near Mena Emirion N of Xanthi, edge of a forest, 635.

149. *Crataegus orientalis* Pallas

MA: Dr: the Rodopi Mts.: dense thicket on a rocky range about 5 km S of Zagradenia along the road to Silli, 686; Kz: in clearings and wood edges SW of Georgianni, ca 1050 m alt., 1416;

PE: Ah: Erimanthos Mts.: in forest of *Abies cephalonica* above Kaletzi, 1000 - 1200 m alt., 1310.

150. *Eriolobus trilobatus* (Poiret) M. Roemer

TR: Al: only a few specimens about 18 km N of Loutros along the road to Pessani 514; about 13 - 14 km N of Loutros along the road to Pessani, in young pine plantation, ca 300 m alt., 522; 523; 570; 571; 572; about 4 km SE of Meste between Makri and Sapae, only one specimen in scrub, 590.

151. *Malus dysyphylla* Borkh.

TR: Ko: near Jerakas NE of Xanthi, thickets on a slope above a stream, 638.

152. × *Malosorbus florentina* (Zucc.) Browicz

PE: La: about 1 - 1,5 km N of Karies along the road to Agios Petros, in *Quercus coccifera* scrub, rare, 922; 962; 965; 966;

ST: Att: Parnis Mt., forest of *Abies cephalonica* near the road to Agios Trias, 1300 m alt., 41; 46; 47.

153. *Prunus cocomilia* Ten.

MA: Kz: on edge of a leafy forest SW of Georgiani between Veria and Kozani, ca 1050 m alt., 1427;

PE: Ak: Parnon Mts.; single specimens on a slope near the pass between Agios Petros and Agios Ioanis, ca 1100 m alt., 960; Me: Tajgetos Mts.: about 3 km NE of Atremisia along the road to Sparti, forest of *Pinus nigra*, 1156;

ST: At-Ak: solitary, old specimens in the upper parts of a gorge on the slope of Kambia above Komboti village, 1577.

154. *Prunus spinosa* L.

subsp. *dasyphylla* (Schur) Domin

MA: Thasos: Mikron Prinos, common near the road to Agios Padeleimon, 444; Po: Cha: edge of a forest of *Quercus frainetto* between Paleokastron and Arnea not far from the road fork to Taxiarchis, 251; thicket not far from the beach between Stratonion and Olympia, 376; Sit: roadside thicket near Tristinika between Neos Marmaras and Koufos, 160; thicket near Armenistis Beach N of Sarti, 233;

PE: Ak: about 11 km S of Tripoli along the road to Sparti, in loose *Quercus coccifera* scrub, ca 750 - 800 m alt., 908; about 14 km S of Tripoli along the road to Sparti, roadside thicket, 750 - 800 m alt., 913; in scrub of *Quercus coccifera* at the base of Erimanthos Mts. near Agios Georgios, 1327;

ST: Fo: roadside thicket S of Pyrgos in the direction of Amphissa, ca 700 m alt., 1340;

TR: Al: thicket on a river bank about 25 km N of Loutros along the road to Pessani, 521.

155. *Pyracantha coccinea* M. Roemer

IP: At: slopes of a stream valley between Athamanion and Terpnas, probably wild, 1715; Io: edges of maquis between Variades and Dervisiana, along the road from Assos to the motorway; it gives the impression of being wild, 1704;

MA: Po: Cha: thicket about 2 - 3 km S of Poligyros along the road to Skala Gerakinis, 240.

156. *Pyrus* × *armud* Hausskn. et Bornm.

TR: Al: about 23 km N of Loutros along the road to Pessani, loose forest, 512.

157. *Pyrus communis* L.

MA: Se: thicket on the bank of a small river about 2 km N of Serrae, 765.

158. *Pyrus spinosa* Forsskal

MA: Ka: in open places between Podohorion and Messoropi, 419; near Mikro Timbano, 467; Thasos: small trees in a thicket between Potamia and Chrisi Akti, 433; Po: Cha: Ath: small trees about 1 - 2 km E of Ouranoupolis, 352; Th: shrubby specimen in a thicket among fields about 2 km NE of Dorkas, near the road Thessaloniki—Serrae, 1402;

PE: Ak: single trees among grasses and devastated scrub about 8 km S of Kosmas, ca 900 m alt., 1004;

ST: At-Ak: frequent on pasture grounds with remainders of maquis between Babinion and Aetos, 1670; Fo: old trees among fields between Plateon and Larisa Kresmeste, 62.

159. *Rosa agrestis* Savi

IP: At: S edge of Drosopigi village, 1713; Ig: thicket of *Phlomis fruticosa* on the bank of a dried stream N of Masarakia between Karterion and Igoumenitsa, 1545; near a road to Paramythia close to Vouvopotamos, 1552; valley of the Akheron river near Glyki between Vouvopotamos and Paramythia, 1557; about 1 - 2 km N of Paramythia, 1562; Io: thicket near Rodotopion, 7 km NW of Ioanina, 1500, 1503; vicinity of Variades, ca 800 m alt., 1706; slopes above Metsovon., 1300 m., 1724; exposed calcareous rocks below the pass between Metsovon and Panagia, not far from the road fork to Milea, 1500 - 1700 m alt., 1748; Pr: edge of maquis a little N of Pappadatae, toward Assos, ca. 300 m alt., 1701;

MA: Dr: S bank of the Nestos river about 1 km S of Paranestion, 659; the Rodopi Mts.: about 19 km S of Zagradenia along the road to Silli, ca 1100 m alt., 666; Falakron Mts. (Boz Dag): near the road fork to Drama, Kato Nevrokopion and Volax, open places, 709, 714; a little S of Volax, open places with remainders of a thicket, 711; above Pyrgi, thicket, ca 800 m, 750; 753; Thasos: Mikron Prinon, scrub near the road to Agios Padeleimon, 459; Kz: pastures and thicket near Polymylos, 1200 m, 1431; in juniper thicket on the S slope of Vellia Peak, E of Siatista, 1445; Po: Cha: thicket about 2 - 3 km S of Poligiros, ca 420 m, 241; 246; Ath: maquis on a calcareous slope between Nea Roda and Ierissos, 335; Se: thicket of *Rhus coriaria* about 6 km N of Serrae, in the direction of Orini, 763; Th: in maquis between Kalokastron and Lachanas, 9 12; about 5 km SW of Kalokastron, near the road to

Thessaloniki, 820; about 2 km NE of Dorkas, thicket on the slopes of a small stream valley, 1400;

PE: Ah: Erimanthos Mts.: in scrub *Quercus coccifera* near Kaletzi, 700-800 m alt., 1308; above Kaletzi, 900-1000 m alt., 1313; Ak: roadside thicket about 2 km S of Tripoli, 902; in scrub of *Quercus coccifera* about 11 km S of Tripoli along the road to Sparti, 750-800 m alt., 904; near cross-road Tripoli, Sparti and Agios Petros, roadside thicket, shrubs 2,5 m tall, 919, 920; about 2 km W of Agios Petros, thicket near road to Karies, ca 1000-1050 m alt., 939, 940; Me: stony slopes above the road near Lagada, 400-450 m alt., 1085; Tajgetos Mts.: 3 km NE of Artemisia along the road to Sparti, edges of forest of *Pinus nigra*, ca 1000 m alt., 1155;

ST: At-Ak: thicket on the hills between Thyriion, Voustrion and Trifos, ca 400-600 m alt., 1630; about 3 km S of Ellinika toward Mesolongion, roadside areas, 1655; between Babinion and Aetos, pasture grounds with remainders of a thicket, chiefly of *Paliurus spina-christi*, 1668; rocky rubble at the base of Kambia slope above Komboti village, 1680, 1682; E of Floriada toward Petra, 1691; Att: Parnis Mt.: thicket near the road to Agios Trias, ca 900 m alt., 33; ibidem, 1200 m alt., 40; Po: roadside thicket S of Pyrgos, near the road to Amphissia, ca 700 m alt., 1342, 1343; Lefkas Island: Drimonas, near the road, 1616; edge of an olive orchard near Agios Nikitas, 1619;

TH: Tr: between Korydallos and Metsovon, near the road fork to Malakasion, thicket among pasture grounds, 1472;

TR: Al: in scrub of *Quercus coccifera* about 2-3 km W of Pherae, 486; ca 2,5 km W of Mesimbria W of Makri, 503; ca 3-4 km E of Nipsa, in oak forest, 582; 585a; in thicket of *Vitex agnus-castus* near the beach about 4 km W of Makri, 587; Ko: thicket on slopes of a river valley 5-6 km NE of Nea Sanda, 596; slope above a road near Mena Emirion NW of Xanthi, 630; bank of a stream near Jerakas NW of Xanthi, 637.

160. *Rosa arvensis* Hudson

IP: At: edge of a fir forest, elevated escarpment between Athamanion and Terpnos, 1714;

MA: Dr: Falakron (Boz Dag): thicket on a stream bank near Pyrgi, 754; Po: Cha: edge of the forest of *Quercus frainetto* near the road fork Paleokastron, Arnea and Taxiarihis, 248; Taxiarihis, 272; Th: roadside thicket about 2 km NE of Dorkas, 1392;

PE: about 3 km NW of Karies along the road to Agios Petros, woods of *Quercus frainetto*, ca 1000 m alt., 927;

TH: Tr: shrub among the pasture grounds near the road fork Malakasion, Korydallos and Metsovon, 1477;

TR: Ko: slope above the road near Mena Emirion NW of Xanthi, 632; near a stream not far from Jerakas, NW of Xanthi, 641.

161. *Rosa canina* L.

IP: Io: thicket near Rodotopion, 1501;

MA: Dr: thicket about 1 km E of Adriani between Drama and Paranestion, 649; valley of a small stream N of Prosotsani between Drama and Kato Nevrokopion, 727; the Rodopi Mts.: about 19 km S of Zagradenia, near road to Silli (Paranestion), ca 1100 m alt., 667; Falakron Mts.: bank of a stream near Pyrgi, 761; Ka: near

the road between Hrissoupolis and Keramoti, 429; Thasos: scrub near Paleon Prinos, 442; 443; Mikron Prinos, thicket near a road to Agios Padeleimon, 450; Kz: edge of a deciduous forest SW of Georgiani, ca 1050 m alt., 1421; gorge of Benetikos river, ca 10 km S of Grevena, 1465; Po: Cha: edge of a forest of *Quercus frainetto* near the road fork Paleokastron, Arnea and Taxiarchis, 249; Taxiarchis, 271; between Arnea and Taxiarchis, ca 1000 m alt., 288; thicket between Stratonion and Olympia, 360, 372; Ath: thicket above a stream about 1-2 km E of Ouranoupolis, 340; Sit: about 1 km S of Sarti, 260; thicket near Armenistis Beach N of Sarti, 235; Th: ca 5 km SW of Kalokastron 321; thicket between Assiros and Dorkas, about 450 m alt., 1391; Th: Kereditlon Mts.: in maquis at the base of the mountains N of Asprovalta, 390;

PE: Ag: thicket at edges of fields ca 0,5 km E of Adamion. S of Epidauros, 867; Ah: about 3 km W of Pagrateika Kal between Patra and Tripoli, in thicket of *Prunus spinosa*, 1276; Erimanthos Mts.: above Kaletzi, 900 - 1000 m alt., 1314; 1315; Ak: near Steno E of Tripoli, rare in thicket of *Amygdalus webbii*, 901; ca 10 km S of Tripoli, roadside thicket near road to Sparti, 903; about 2 km W of Agios Petros near road to Karies, ca 1000 - 1050 m alt., 941; E of Agios Ioanis, near road to Astros, 800 - 900 m alt., 952; about 8 km S of Kosmas along the road to Geraki, ca 900 m alt., 1005; Lefkohori, near road to Lagadia, thicket on an abrupt slope, 1265; thicket on edges of vineyard between Vlaherna and Levidi, 750 - 850 m alt., 1270; 1272; Me: Tajetos Mts.: bottom of a dried stream valley E of Tseria, 1125; about 3 km NE of Artemisia along the road to Sparti, edges of forests of *Pinus nigra*, ca 1100 m alt., 1154; Kiparisias Mts.: thicket above Rodia, ca 400 m alt., 1198; 1200;

ST: At-Ak: thicket on hills among Thyriou, Voustrion and Trifos, 400 - 600 m alt., 1628; about 3 km S of Ellinika toward Mesolongion, roadside areas, 1656; E of Floriada toward Petra 1692; Fo: roadside thicket S of Pyrgos along the road to Amphissa, ca 700 m alt., 1344; near Pyrgos, 750 - 850 m alt., 1347; thicket among fields near Kato Bralos S of Lamia, 1358; Ft: thicket on edges of vineyards 1 km NW of Kato Bralos, 1366; in scrub of *Quercus coccifera* about 20 km N of Lamia along the road to Larisa, 1379;

TH: Lr: Olympos Mt.: above Litochoron, ca 1050 m alt., 75; Tr: pastures near the road fork to Korydallos, Metsovon and Malakasion, 1475; pastures a little SE of Kastanea, W of the cross-road Kalabaka — Ioanina — Grevena, 1754;

TR: Al: 2 - 3 km W of Pherae, in *Quercus coccifera* scrub, 485; in olive orchards ca 3 km E of Makri, 491; scrub between Makri and Dikella, 498; edge of a forest about 23 km N of Loutros along the road to Pessani, 515; 18 km N of Loutros, 528; 5 - 6 km N of Loutros, 548; about 9 km N of Makri, scrub, 556; ca 2 km N of Loutros, 568; Nipsa N of Alexandroupolis, 576; 3 - 4 km N of Nipsa, 583; Ko: near Mikro Timbano, 463; thickets about 2 km E of Xanthi, 470; Nea Sanda, in thicket of *Quercus frainetto*, 591; edge of *Quercus coccifera* scrub near Kallitirion E of Komotini, 608; Xanthi, slopes above the road to Echinios, 615.

162. *Rosa gallica* L.

MA: Dr: Falakron Mts. (Boz Dag): remainders of a thicket S of Volax, 712; 713; thicket near Pyrgi, ca 800 m alt., 744; Kz: thicket among fields not far from the road fork to Siatista, Grevena and Kozani, 1441; thicket near Taxiarchis very rare, 1451;

ST: Fo: thicket on a slope near Kato Bralos S of Lamia, 1359;

TH: Lr: Mt. Olympos, open places on the edges of maquis near Agion Dionysios, ca 350 m alt., 81;

TR: Al: opened places on edges of a forest about 18 km N of Loutros along the road to Pessani, 526.

163. *Rosa pendulina* L.

IP: Io: below pass between Metsovon and Panagia, near the road fork to Milea, 1500 - 1700 m alt., 1738;

MA: Dr: the Rodopi Mts.: 19 km S of Zagradenia along the road to Silli (N of Paraneftion), 1100 m alt., 668; 669; "Kentriki Forest" N of Zagradenia, on the edge of a forest, 673.

164. *Rosa pulverulenta* Bieb.

IP: Io: pastures N of Metsovon, 1487; slopes above Metsovon, 1722; 1723; 1725;

MA: Dr: the Rodopi Mts.: ca 5 km S of Zagradenia along the road to Silli, ca 1400 m alt., 687; Kz: SW of Georgiani between Veria and Kozani, 1050 m alt., 1425; pastures near Polymylos between Veria and Kozani, 1200 m alt., 1429; S slope of Vellia Peak E of Siatista, 1443;

TH: Tr: vicinity of the road fork to Malakasion, Korydallos and Metsovon, pasture grounds, 1469; 1470; 1471.

165. *Rosa sempervirens* L.

IP: Ig: slopes of the valley of the Akheron river near Glyki between Vouvopotamos and Paramythia, quite frequent, 1556; thicket above the road between Paramythia

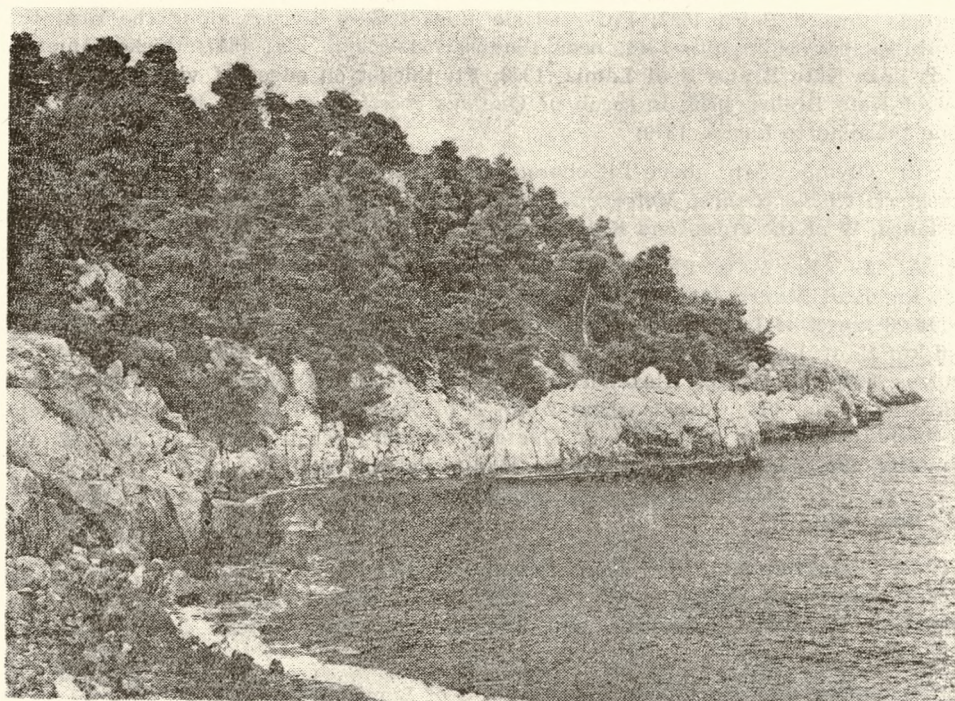


Fig. 13. Fragment of a seaside forest of *Pinus halepensis* Miller on the southeastern tip of the Kassandra peninsula. Phot. K. Jakusz

and Morphion, near Kira Panagia, 1564; in dense maquis in a small gorge near Tzara SE of Morphion, 1571; Io: bank of a stream between Klimatia and Lefkothea, in *Quercus coccifera* thicket, ca 500 m alt., 1504, 1505; not far from Keramitsa NW of the road Ioanina-Igoumenitsa, 650 - 700 m alt., very rare 1515; Pr: dense roadside thicket between Thesprotikon and Pappadate, 1698;

MA: Po: Cha: between Gerakini and Metamorfossis, 134; thicket about 2 - 3 km S of Poligiros, ca 420 m, rare, 247; on a stream bank ca 3 km S of Stratonion toward Ierissos, 305; between Stratonion and Olympia, 359; scrub between Olympia and Stavros, 381; Ath: ca 2 km NW of Ouranoupolis, in maquis, 311; 1 - 2 km E of Ouranoupolis, in maquis, 348; Kas: near Kapsochora, in thicket of *Rubus sanctus* near the road to Paliourion, 85; 86; ca 1 km SW of Paliourion, climbing shrubs up to about 10 m tall, common, 91; between Paliourion and Akros Agios Nikolaos, 95; 102; dried stream banks in Kalandra, 129; Sit: rare in maquis between Paradissos and Neos Marmaras, 154; about 3 km N of Kalamitsion along the road to Sarti, often in maquis, 193; ca 1 km S of Sarti, 205; Th: Cha: at the base of Keredilion Mts. N. of Asprovalta, 388;

PE: Ag: between Nea Epidauros and Ligurion, thicket on the bank of a stream, 854; Ah: S of Stavrodromi, thicket near a road, 1305; roadside thicket past Vassilikon in the direction of Patra 1329; Erimanthos Mts.: in dense scrub of *Quercus coccifera* near Kaletzi, 700 - 800 m alt., 1307; Il: about 2 km E of Lepreo along the road to Nea Figalia, bank of a stream, ca 300 m alt., 1221; stream-side thicket near the road fork to Krestena, Zaharo and Pirgos, 1234; between Olympos and Miraka, 1237; between Linaria and Louvro, roadside thicket, 1238; valley of the Erimanthos river between Vasilaki and Livadaki, 1251; rudimental scrub in a small gorge about 2 km N of Agia Triada along the road to Patra, ca 400 m alt., 1296; La: thicket near stream about 3 - 4 km W of Nomia, S of Monemvasia, 1040; between Elika and Pantanasa, dried stream valley, thicket, 1057; deep valley of a dried stream between Lagada and Agios Nikolaos, 1098; Me: rudimental scrub in a dried stream valley between Risomilon and Velika, 1163; edges of a scrub near the road fork to Mesini, Pilos and Kokino, 1175; it forms a scrub together with *Rubus* in a dried stream valley about 3 - 4 km NE of Pilos, 1178; scrub on the banks of a small stream near Korifatsi N of Pilos, abundant, 1185; in scrub of *Quercus coccifera* near Mouriatada, 1197;

ST: At-Ak: in maquis between Lutrakion and Trifos, 1624; in maquis on hills between Thyriion, Voustrion and Trifos, 400 - 600 m alt., in some places frequent, 1633; roadside thicket near Klivia N of Amphilochia, 1683; Lefkas Island: thicket on edges of olive orchards between Maradohorion and Vasiliki, 1610;

TH: Lr: Mt. Olympos, in dense maquis a little below Agion Dionysion, only a few specimens, 78; 79;

TR: Al: in maquis in a narrow valley ca 2,5 km W of Mesimbria, W of Makri, 504; in maquis on the slope of a dried stream valley ca 9 km N of Makri along the road to Sapae, 559.

166. *Rosa tomentosa* Smith

MA: Dr: about 7 km SW of Paranestion along the road to Drama, slope above the road, 656; the Rodopi Mts.: ca 5 km S of Zagradenia along the road to Silli, 689; ca 2 km N of Zagradenia, not far from the „Kentriki Forest”, edge of the forest, 676;

TH: Tr: Mt. Olympos: at base of a mountain, near Agion Dionysion, ca 350 m alt., 80; thickets among pastures near the road fork to Metsovon, Korydallos and Malakasion, 1468;

TR: Ko: on a slope above the stream near Jerakas, between Xanthi and Stavropolis, 639.

167. *Rosa turcica* Rouy

MA: Kz: thermophilous places among a thicket of juniper on S slopes of Vellia Peak E of Siatista between Kozani and Grevena, 1434; 1444.

168. *Rosa villosa* L.

Th: Lr: Olympos, from Litochoron side, ca 1200 m alt., 1385.

169. *Rosa pendulina* L. × *R. canina* L.

IP: Io: exposed calcareous rocks below the pass E of Metsovon, near the road fork to Milea, 1500 - 1700 m alt., 1480; 1481; 1739.

170. *Rubus canescens* DC.

MA: Cha: between Paleokastron and Arnea, near the road fork to Taxiarchis, common, 253; edge of a forest near the road Neohorion — Stratoniki, 291; 292; scrub, between Stratonion and Olympia, 377;

TR: Al: about 18 km N of Loutros near the road to Pessani, 529; 530.

171. *Rubus discolor* Weihe et Nees agg.

MA: Dr: thickets in a small stream valley N of Prosotsani, 726; the Rodopi Mts., ca 30 km N of Silli along the road to Zagradenia, slope covered with a pine forest, 661;

Po: Cha: between Paleokastron and Arnea near the road fork to Taxiarchis, 252;

TR: Ko: above a stream near Jerakas, between Xanthi and Stavropolis, 642.

172. *Rubus hirtus* Waldst. et Kit. agg.

IP: Io: below a pass between Metsovon and Panagia, not far from the road fork to Milea, 1500 - 1700 m alt., 1731;

MA: Dr: the Rodopi Mts.: about 30 km N of Silli along the road to Zagradenia, slope covered with pine forest, 662.

173. *Rubus ulmifolius* Schott

MA: Cha: near Stratonion, 304; ca 4 km N of Ierissos, slope above a river, 326;
Sit: lower parts of the slopes of Kerasia Peak, 219; Se: valley of a small river about 2 km N of Serrae, scrub in sunny places, 778, 781;

ST: Lefkas Island: between Fterno and Maradochorion, 1601.

174. *Rubus canescens* DC. × *R. ulmifolius* Schott

MA: Po: Cha: between Paleokastron and Arnea, near the road fork to Taxiarchis, edge of a forest, 276.



Fig. 14. Dense maquis stretches on the southeastern tip of the Sithonia peninsula.
Phot. K. Jakusz

175. *Sarcopoterium spinosum* (L.) Spach

MA: Po: Cha: Kas.: open places on the eastern top of Akros Agios Nikolaos, 109;
ST: At-Ak: in devastated maquis on slopes above the sea shore about 9 km S of
Mytikas, 1644;

TR: Al: in olive orchard about 3 km E of Makri, 488.

176. *Sorbus aria* (L.) Crantz

subsp. *aria*

IP: Io: below the pass between Metsovon and Panagia, exposed calcareous rocks
near the road fork to Milea, 1500 - 1700 m alt., 1729;

subsp. *cretica* (Lindley) Holmboe

IP: Io: a little below the pass E of Metsovon, ca 1500 - 1700 m, alt., calcareous
rocks, 1479.

177. *Sorbus austriaca* (G. Beck) Hedlund

MA: Dr: the Rodopi Mts.: ca 19 km S of Zagradenia along the road to Silli, slope
above the road, rare, 1200 m alt., 670.

178. *Sorbus domestica* L.

MA: Po: Cha: between Paelokastron and Arnea, in forest of *Quercus frainetto* near
the road fork to Taxiarchis, 259; near Taxiarchis, slopes of a small gorge, rare, 268;

thicket about 5-6 km N of Stratonion along the road to Olympia, 361; between Olympia and Stavros, thicket, 385; Th: dense thicket near the road between Kalokastron and Lachanas, 13;

TH: Tr: groves on slopes below the road from Kastanea to the road fork Kalabaka — Ioanina — Grevena, rare, 1759;

TR: Al: in groves of *Quercus frainetto* about 18 km N of Loutros along the road to Pessani, 534.

179. *Sorbus torminalis* (L.) Crantz

MA: Dr: the Rodopi Mts.: about 5 km S of Zagradenia along the road to Silli, dense thicket on calcareous rocks, ca 1400 m alt., 684; Falakron Mts. (Boz Dag): Pyrgi, thicket near the village, ca 800 m alt., 747; Kz: SW of Georgiani between Veria and Kozani, ca 1050 m alt., 1419; Po: Cha: between Paleokastron and Arnea, in forest of *Quercus frainetto* near the road fork to Taxiarithis, 256; wood between Neohorion and Stratoniki, 298;

TR: Al: 18 km N of Loutros along the road to Pessani in devastated maquis and forests of *Quercus frainetto*, 542.

37. RUBIACEAE

180. *Putoria calabrica* (L. f.) DC.

IP: Ig: eroded slopes near Kastaniani ca 6 km N of Dodoni, 1493; rocky slopes between Morphion and Mesopotamion, 1546; Io: rocky slope above the road Metsovon — Ioanina SE of Metsovon, near the road fork to Mega Peristerion, 1490; bare slopes above the road Ioanina — Igoumenitsa about 2-3 km E of Vrosina, 1511;

ST: At-Ak: slopes of a flood dam on bank of Aheloois river near Matsoukion, frequent, 1665; E of Floriada toward Petra, 1694; Ft: bare, craggy slopes above the road S of Ieraklia, 1373, 1374; Lefkas Island: a few kilometers N of Agios Nikitas, steep slopes, stone falls above the road, frequent, 1622.

38. RUTACEAE

181. *Ruta chalepensis* L.

ST: At-Ak: Astakos, scrub on rocky slopes on N edges of the town, 1649.

182. *Ruta graveolens* L.

MA: Po: Cha: Sit: rocky, calcareous slopes above the bay near Koufos, 186;

ST: Fo: rocky slope above the road between Delphi and Arachova, ca 500 m alt., 1335.

39. SALICACEAE

183. *Populus alba* L.

MA: Kz: thicket on slopes of the valley of the Aliakmon river between Kozani and Grevena, 1449; Cha: solitary trees between Olympia and Stavros, 383; Kas: single tree on the slope of a dried stream valley in Kalandra, 126; Se: small river valley about 2 km N of Serrae, 780;

PE: Ag: big trees in a small stream valley between Nea Epidauros and Ligurion, 857.

184. *Populus tremula* L.

MA: Dr: the Rodopi Mts.: about 5 km S of Zagradenia along the road to Silli, frequent in forest, 696; Kz: SW of Georgiani between Veria and Kozani, 1050 m alt. 1418; Po: Cha: between Neohorion and Stratoniki, wood, 301;

PE: Ak: Agios Petros, above the road to Agios Ioanis, ca 850 - 900 m alt., 944.

185. *Salix alba* L.

MA: Cha: in the vicinity of Taxiarchis, 274; thicket on a stream bank near Stavros, 386; Kas: Kalandra, slopes of a dried stream valley, 127; banks of a stream NW of Destenika, 182;

PE: Ak: dried stream valley ca 3 km NW of Karies along the road to Agios Petros, 929; Il: the Erimanthos river banks between Vasilaki and Livadaki, 1255.

186. *Salix amplexicaulis* Bory

IP: Io: valley of a small river between Mega and Mikro Peristerion, 1721; below a pass of Metsovon, near the road fork to Milea, 1500 - 1700 m alt., 1743;

MA: Dr: gravel-heap of the Nestos river about 1 km S of Paranestion, 660; Falakron Mts. (Boz Dag): valley of a small stream above Pyrgi, ca 800 m alt., 733; Po: Cha: thicket on a stream bank near Stavros, 378; along a stream near Taxiarchis, 367; Se: banks of a small river about 2 km N of Serrae, 771; Th: Cha: Keredilion Mts., at the base of mountains on stream banks N of Asprovalta, 404;

PE: Il: the Erimanthos river banks between Vasilaki and Livadaki, 1248; 1254; bottom of a small gorge of a dried stream S of Labia, ca 850 m alt., rare, 1289;

ST: Ft: thicket at the base of a small slope near Kato Bralos S of Lamia, 1364;

TR: Ko: a few kilometers N of Xanthi, on river banks, 618.

187. *Salix caprea* L.

IP: Io: a little below pass between Metsovon and Panagia, in a pine forest, 1500 - 1700 m alt., 1728;

MA: Dr: the Rodopi Mts.: „Kentriki Forest” about 2 km N of Zagradenia, ca 1500 m alt., 675; Th: Cha: on the bank of a stream N of Asprovalta, at the base of Keredilion Mts., 399.

188. *Salix cinerea* L.

MA: Dr: the Rodopi Mts.: stream valley ca 17 km S of Zagradenia along the road to Silli, 701; Po: Cha: Sit: only one specimen on a stream bank near Platanitsa N of Sarti, 202; Se: valley of a stream ca 2 km N of Serrae, 766.

189. *Salix elaeagnos* Scop.

IP: Ig: willow thicket on the banks of the Akheron river near Glyki between Vouvopotamos and Paramythia, 1558; Io: slopes of a valley of a small stream near Kastaniani N of Dodoni, 1494; or river banks between Mega and Mikro Peristerion, 1720;



Fig. 15. *Ephedra fragilis* Desf. subsp. *campylopoda* (C. Meyer) Asch. et Graebner. suspended from rocks — a wide gorge near Destenika. (Sithonia). Phot. K. Jakusz

MA: Dr: gravel-heaps of the Nestos river about 1 km S of Paraneston, 660a; the Rodopi Mts.: above a small river about 35-40 km S of Zagradenia along the road to Silli, 706; Kz: ca 10 km S of Grevena, banks of the Benetikos river, 1454;

PE: Il: banks of the Erimanthos river between Vasilaki and Livadaki, gravelly places, 1253; rocky gorge of a dried stream on S edge of Labia, 1295.

190. *Salix fragilis* L.

MA: Dr: the Rodopi Mts.: banks of a small river about 17 km S of Zagradenia along the road to Silli, 698; Falakron Mts.(Boz Dag): stream banks near Pyrgi, 756; Se: thicket on banks of a small river ca 2 km N of Serrae, 767.

191. *Salix purpurea* L.

MA: Dr: gravelly places on the Nestos river banks about 1 km S of Paraneston, 657.

192. *Salix triandra* L.

MA: Se: on the banks of a small river about 2 km N of Serrae, 770;

TR: Ko: slope above a stream near Jerakas, NW of Xanthi, 640.

40. SANTALACEAE

193. *Osyris alba* L.

IP: Ig: thicket near Kastaniani, ca 6 km N of Dodoni, 1492; scrub near Elea N of Igoumenitsa, 1524; dried slopes covered with *Phlomis fruticosa* a little N of Masarakia, 1544; Pr: a little N of Pappadatae toward Assos, ca 300 m alt., rare, 1699;

MA: Po: Cha: Ath: in maquis about 1-2 km E of Ouranoupolis, 345; Kas: thicket between Paliourion and Akros Agios Nikolaos, 100; Se: sunny places in the valley of a small river ca 2 km N of Serrae, 768; 1767; Th: between Thessaloniki and Liți, in forest of *Pinus halepensis*, 1414; Cha: at the base of Keredilion Mts. N of Asprovalta, 398;

PE: Ah: at the base of Erimathos Mts. near Agios Georgios, in scrub of *Quercus coccifera*, 1325; Ak: near Moni Elonis N of Kosmas, scrub on the N slope, 500-550 m alt., 1020; between Levidi and Vlaherna, 750-850 m alt., in scrub of *Quercus coccifera*, 1271; At: about 7 km N of Kaloni along the road to Ano Fanari, 879; Me: between Korifatsi and Hora, near excavation of Nestor's Tomb, 1186; in maquis on slopes about 2-3 km N of Kalo Nero between Kiparisia and Zaharo, 1204;

ST: Fo: in scrub of *Quercus coccifera* on rocky slopes above the road between Delphi — Arachova, ca 500 m alt., 1337; Lefkas Island: in olive orchards between Drimonas and Agios Nikitas, 1618;

TR: Al: in maquis on the slopes between Makri and Dikella, 494; Ko: thicket among fields about 2 km E of Xanthi, 471.

41. SOLANACEAE

194. *Lycium europaeum* L.

ST: At-Ak: a few shrubs among fields below Komboti village, 1671.

195. *Solanum elaeagnifolium* Cav.

MA: S suburbs of Thessaloniki, common on ruderal places, 1415.

42. STYRACACEAE

196. *Styrax officinalis* L.

TR: Ko: thicket about 2 km of Xanthi (wild?), 473.

43. THYMELAEACEAE

197. *Daphne laureola* L.

TH: Lr: Mt. Olympos slopes above Litochoron, ca 1050 m alt., 74.

198. *Daphne oleoides* Schreber

IP: Io: below the pass E of Metsovon, 1500 - 1550 m alt., calcareous rocks, 1484.

199. *Thymelaea hirsuta* L.

PE: La: sunny, dried places near a road between Abelohori and Skala, 1028;

ST: Att: ruderal communities near Chalkis, 54; ruderal areas on the shore of Saronikos Kolpos ca 4 km W of Megara, 829;

200. *Thymelaea tartonraira* L.

ST: Att: Mt. Parnis, sunny places near a road to the top of the mountain, 1200 m alt., 50.

44. TILIACEAE

201. *Tilia cordata* Mill.

MA: Dr: the Rodopi Mts., about 25 km S of Zagradenia along the road to Silli, slope of a river valley, rare, 702.

202. *Tilia platyphyllos* Scop. subsp. *pseudorubra* C. Schneider

IP: Io: below the pass between Metsovon and Panagia, near the road fork to Milea, 1500 - 1700 m alt., calcareous rocks, 1737.

203. *Tilia tomentosa* Moench

MA: Dr: the Rodopi Mts.: ca 17 km S of Zagradenia along the road to Silli, valley of a small river, 699; Falakron Mts. (Boz Dag): thicket above Pyrgi, ca 800 m alt., 731; Th: Cha: on slopes of a valley of a stream at the base of Keredilion Mts. N of Asprovalta, 392;

TH: Tr: groves on slopes about 6-7 km NE of Kastanea along the road to Kalabaka, 1756; 1760.

45. ULMACEAE

204. *Celtis australis* L.

IP: Ig: Kira Panagia, between Paramythia and Morphion, near the road within the village, 1568;

MA: Dr: about 1 km E of Adriani, 650; valley of a small stream N of Prosotsani between Drama and Kato Nevrokopion, 728; the Rodopi Mts.: ca 35 - 40 km S of Za-

gradenia along the road toward Silli, rare on the slopes below the road, small trees, 705; Falakron Mts.: Pyrgi, in village, 560; Ka: between Messoropi and Domatia, thicket on slopes, 423, 426; Thasos: Mikron Prinos, frequent, 454;

PE: Ak: dried stream valley between Livadaki and Toubitsi, 1260; La: Mistras W of Sparti, single trees among ruins of an antique town, 984; Me: Tajgetos Mts.: valley of a dried stream E of Tseria, rare, 1109;

ST: Fo: Thermopylai, scrub, rare, 824; Ft: near Ieraklia S of Lamia, only one tree among grasslands, 1375;

TR: Al: between Nea Chili and Makri, single trees near the road, 478; Makri, small tree at the northern end of the village, 588; Ko: about 2 km E of Xanthi, thicket among fields, 468; Gratini E of Komotini, 602; Near Kallitirion E of Komotini, small tree in a scrub of *Quercus coccifera*, 606; a few kilometers N of Xanthi, rocky place in the valley of a river, 623.

205. *Celtis glabrata* Steven

Ma: Po: Cha: Sit: NW of Destenika, on rocky slopes, rare, 163; near Neos Marmaras, west part of Poliomiilio gorge, on rocky slopes, rare, 175, 175.

206. *Ulmus minor* Mill.

subsp. *minor*

ST: At-Ak: ash-elm forest between Astakos and Neochorion, N of Lesinion, 1652.

subsp. *canescens* (Melville) Browicz et Ziel.

MA: Dr: the Rodopi Mts.: 35 - 40 km S of Zagradenia along the road to Silli, slope of a river valley, 707; Ka: between Messoropi and Domatia, on a slope below the road, 422, 425; Thasos: Mikron Prinos, single tree in a thicket, 456; Kz: gorge of Benetikos river ca 10 km S of Grevena, 1458; Po: Cha: between Paleokastron and Arnea, near the road fork toward Taxiarithis, in forest of *Quercus frainetto*, 258; slope above the river about 4 km N of Ierissos, 322; valley of a small stream between Stratonion and Olympia, 370; thicket ca 3 km N of Olympia along the road to Stavros, 384; Kas: thicket on slopes of a dried stream in Kalandra, 128; Sit: at the base of Melitonas Peak S of Neos Marmaras, 155; not far from Armenistis Beach N of Sarti, 239; Se: edge of a thicket in the valley of a small river about 2 km N of Serrae, 777; Th: thicket near the road between Kefalochorion and Evangelistria, 15; roadside thicket about 2 km NE of Dorkas, 1395;

PE: Ak: between Levidi and Vlaherna, in scrub of *Quercus coccifera*, ca 750 - 850 m alt., 1274; dried stream valley about 3 - 4 km NE of Pilos, 1176;

TR: Al: thicket about 2 - 3 km W of Pherae, 482; Ko: Mikro Timbano, 462; near Nea Kesani ca 6 km of Porto Lagos, single old trees among fields, 610.

46. UMBELLIFERAE

207. *Bupleurum fruticosum* L.

MA: Po: Cha: Kas: SE of Paliourion, in dense maquis, 111;

PE: Ak: Lefkohori, near the road to Lagadia, scrub on an abrupt slope, 1264; At: Anno Fanari, scrub on a slope above the road to Kaloni, 891; Kr: about 6 km NW of Sofiko, in pine forest, ca 300 m alt., 830;

ST: At: Mt. Parnis, near the road to Agios Trias, in maquis, ca 900 m alt., 28.

47. VERBENACEAE

208. *Vitex agnus-castus* L.

IP: Io: slopes above a road near Xechoro between Keramitsa and Filiata, 1517;

MA: Thasos: beach between Pachys and Skala Rachoni, 460; Po: Cha: Kas: edge of a beach about 2.5 km E of Paliourion, 94; Sit: near Tristinika between Neos Marmaras and Koufos, common, 158a; Th: Cha: at the base of Keredilion Mts. N of Asprovalta, in maquis, 389;

PE: Ag: about 3-4 km N of Nea Epidauros, grasses with thickets of *Vitex*, 852; between Nea Epidauros and Ligurion, on stream banks, 856; Ah: S of Stavrodromi, ca 350 m alt., thicket near a road, 1303; between Vassilikon and Patra, roadside thicket, 1330; between Patra and Rion, thicket with *Myrtus communis*, 1331; La: about 2-3 km SE of Agios Anargiri between Sparti and Geraki, deep valley of



Fig. 16. *Celtis glabrata* Steven. A barbarium specimen collected on the *Sithonia* peninsula, NW of Destenika. Phot. K. Jakusz

a stream, 987; Me: deep valley of a dried stream between Lagada and Agios Nikolaos, 1090;

TR: Al: about 2.5 km W of Mesimbria, in maquis in a narrow valley W of Makri, 501.

48. VITACEAE

209. *Vitis silvestris* Gmel.

MA: Po: Cha: Kas: Kalandra, thicket on slope of a valley of a dried stream, 124;
Sit: near Tristinika between Neos Marmaras and Koufos, 157.

Institute of Dendrology
62-035 Kórnik

Materiały do flory drzew i krzewów Grecji

Streszczenie

W latach 1979 - 1981 Instytut Dendrologii Polskiej Akademii Nauk w Kórniku, w ramach współpracy z Goulandris Natural History Museum w Kifissia koło Aten, zorganizował trzy wyprawy dendrologiczne do Grecji. Celem tych wypraw było z jednej strony zebranie porównawczych materiałów zielnikowych dla prac z zakresu systematyki drzew i krzewów, a z drugiej strony danych o stanowiskach poszczególnych gatunków dla przyszłych opracowań chorologicznych. Poszukiwania terenowe prowadzone były głównie na obszarach przy morskich, mniej więcej do wysokości 800 - 1000 m n.p.m., w strefie rozprzestrzenienia dwóch głównych dla Śródziemnomorza formacji roślinnych — makki i frygany.

Pierwsza wyprawa przebywała w roku 1979 w północno-wschodniej Grecji (od 30 maja do 30 czerwca), na terenie Tracji oraz wschodniej i południowej Macedonii łącznie z półwyspem Chalkidiki i wyspą Tasos. Druga wyprawa (od 6 września do 6 października 1980 roku), skierowana była na Półwysep Peloponeski. I wreszcie trzecia wyprawa w 1981 r. (7 - 27 września) skoncentrowała się na zachodniej Grecji (Ipiros i Akarnania).

W wyniku tych wypraw zebrano zbiory zielnikowe (1768 numerów) reprezentowane przez 209 gatunków ze 113 rodzajów i 48 rodzin. Ponadto zebrano próbki drewna różnych gatunków oraz zestawiono kilka tysięcy notowań o stanowiskach wielu drzew i krzewów, zwłaszcza pospolitych. Zbiory te przechowywane są w Zielniku i w Muzeum Dendrologicznym Instytutu Dendrologii w Kórniku, a dublety zostały przekazane do Goulandris Natural History Museum w Kifissia. W czasie wypraw odkryto cały szereg nowych stanowisk gatunków mało znanych i rzadkich, jak na przykład: *Bupleurum fruticosum*, *Malosorbus florentina*, *Eriolobus trilobatus*, *Juniperus drupacea*, *Chamaecytisus subidaeus*, *Thymbra spicata*, *Hypericum hircinum*, *Crataegus heldreichii*, *Podocytisus caramanicus*, *Lithodroa zahni*. Oprócz tego znaleziono kilka nowych dla flory Grecji gatunków, jak: *Celtis glabrata*, *Sorbus austriaca*, *Rubus discolor*.

Zestaw zebranych materiałów zielnikowych opracowany został w układzie alfabetycznym rodzinami, a w obrębie rodziny rodzajami i w końcu w obrębie rodzaju gatunkami. W liście okazów każdego gatunku zachowano również alfabetyczną ko-

lejność dla prowincji i dystryktów cytowanych każdorазово в форме skrótowej (wykaz skrótów w załączeniu).

Okazy zielnikowe o numeracji 1-782 zebrane zostały в roku 1979, 783-1407 в roku 1980, а 1408-1768 — в roku 1981.

Материалы к флоре деревьев кустарников Греции

Резюме

В 1979-1981 гг. Институт Дендрологии Польской Академии Наук в Курнике, в рамках сотрудничества в Музее Естественной Истории Гоуландрис в Кифиссия около Афин, организовал три дендрологические экспедиции в Грецию. Целью этих экспедиций было с одной стороны сбор гербарных сравнительных материалов для работ по систематике деревьев и кустарников, а с другой стороны данных о местообитаниях отдельных видов для будущих хорологических разработок. Полевые изыскания велись главным образом в близости моря, до высоты около 800-1000 м на ур. моря, в зоне распространения двух главных для Средиземноморья растительных формаций — макии и фриганы.

Первая экспедиция находилась в северо-восточной Греции в 1979 г. (с 30 мая по 29 июня), на территории Тракии и восточной и южной Македонии с полуостровом Халкидики и островом Тасос включительно. Вторая экспедиция 1980 г. (с 6 сентября по 6 октября) направилась на Пелопоннесский Полуостров. Третья экспедиция состоялась в 1981 г. (7-27 сентября) концентрировалась на изысканиях в западной Греции (Ипирос и Акарнания).

В результате этих экспедиций были собраны гербарные материалы (1768 листов) представляющие 299 видов с 113 родов и 48 семейств. Кроме того были собраны образцы древесины различных видов и было составлено несколько тысяч записей о встречаемости многих особенно распространенных деревьев и кустарников. Эти сборы хранятся в Гербарии в Музее Института Дендрологии в Курнике, а вторые экземпляры были переданы в Музей Естественной Истории Гоуландрис в Кифиссия. Во время экспедиций было найдено много новых местообитаний мало изученных и редких видов, как например: *Vupleurum fruticosum*, *Malosorbus florentina*, *Eriolobus trilobatus*, *Juniperus drupacea*, *Chamaecytisus subidaeus*, *Thymbra spicata*, *Hypericum hircinum*, *Crataegus heldreichii*, *Podocytisus caramanicus*, *Lithodora zahni*. Кроме того найдено несколько новых для флоры Греции видов — *Celtis glabrata*, *Sorbus austriaca*, *Rubus discolor*.

Собранные гербарные материалы представлены в алфавитном порядке по семействам, а семейств по родам и наконец каждый род разделен на виды. В перечне экземпляров каждого вида сохранена также алфавитная очередность для провинций и дистриктов, которые во всех случаях цитируются в сокращении (прилагается перечень сокращений).

Гербарные экземпляры с номерами 1-782 были собраны в 1979 г., 783-1407 в 1980 г., и 1308-1768 в 1981 году.