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Bupleurum fruticosum L. and *Lonicera implexa* Ait. in the Eastern Mediterranean

1. *BUPLEURUM FRUTICOSUM* L.

B. fruticosum is the only woody member of the genus *Bupleurum* in Greece. This evergreen Mediterranean species of shrub has not received yet a full study of its geographic distribution, and so far only one local map is known of its distribution in Sardinia (Arrigoni 1965). However it is known that it grows in southern Europe, in Portugal, Spain, France, southern Italy, Corsica, Sardinia and Sicily (Willkomm, Lange 1880, Coste 1903, Penzig 1924, Fiori 1925 - 1929, Briquet 1938, Tutin 1968, Franco 1971). Beyond Europe it has been also reported from north-western Africa, Morocco, Algeria and Tunisia (Jahandiez, Maire 1932, Quezel, Santa 1963). However, it is absent from Anatolia, Crete, the Aegean Islands (except for Euboea), Cyprus and also Syria, Israel and Jordan.

This species has been also reported from southern Crimea where, however, it is only in the form of populations gone wild from cultivation or as a cultivated ornamental shrub in parks and gardens (Linčevskij 1950, Rubcov 1972, Tutin 1968). Also in other European countries such as Italy, or France it locally became naturalized (Rouy, Camus 1901, Coste 1903, Fiori 1925 - 1929). Boissier (1872) mentions it also from European Turkey — "Byzanti (ex Castagne an vere spontaneum?)", which information also Mouterde (1970) repeats. Recently Snogerup (1972) indicates that *B. fruticosum* "is cultivated on the Bosphorus, but does not appear to be naturalized".

Thus on the Balkan peninsula *B. fruticosum* occurs exclusively in Greece. First informations about it from that country come from the early XIX century. In the year 1806 Sibthorp and Smith, in the first volume on their "Flora Graecae Prodromus" report that it grows

* This study has been partially supported by the Botanical Committee, Polish Academy of Sciences and the Goulandris Natural History Museum, Kifissia, Greece.

"In Thessaliae maritimis". The same information they repeat next in the third volume of "Flora Graeca" in the year 1819, supplementing this information with an excellent illustration showing a leafy, branched stem with several inflorescences. Unfortunately the localisation of Sibthorp's stand in Thessaly is unknown, nor is it known on what basis was the drawing made — Sibthorp's greenhouse specimen or a fresh plant. *B. fruticosum* was introduced into cultivation already in 1596 (Loudon 1954). Recently from Thessaly only one stand was reported, once only, from Mt. Olympus, however, it can be questioned whether the report is veritable. The region of Olympus is botanically best known, and it seems unlikely that such a characteristic shrub species was missed in the collections of numerous florists.

In subsequent years the number of new stand found slightly increased. Boissier (1872) mentions two further stands from Attica — Mt. Parnes and Mt. Pentelicon and Halacsy (1901-1912) from the Peloponnisos, provinces Argolis, Laconia and Achaia. Since Halacsy's time only a few more stands were reported (Bornmüller 1928, Rechin ger 1943, 1961 and lately Sarlis 1980).

On the basis of all this information and the herbarium collections from more important European Herbaria (ATH.B.BM.C.E.FI.G.JE.K.LD. LE.UPA.W. Herb. Pinatzis-Athens), and also on own collections and field observations made in 1979 and 1980 (Herbarium materials in ATH.

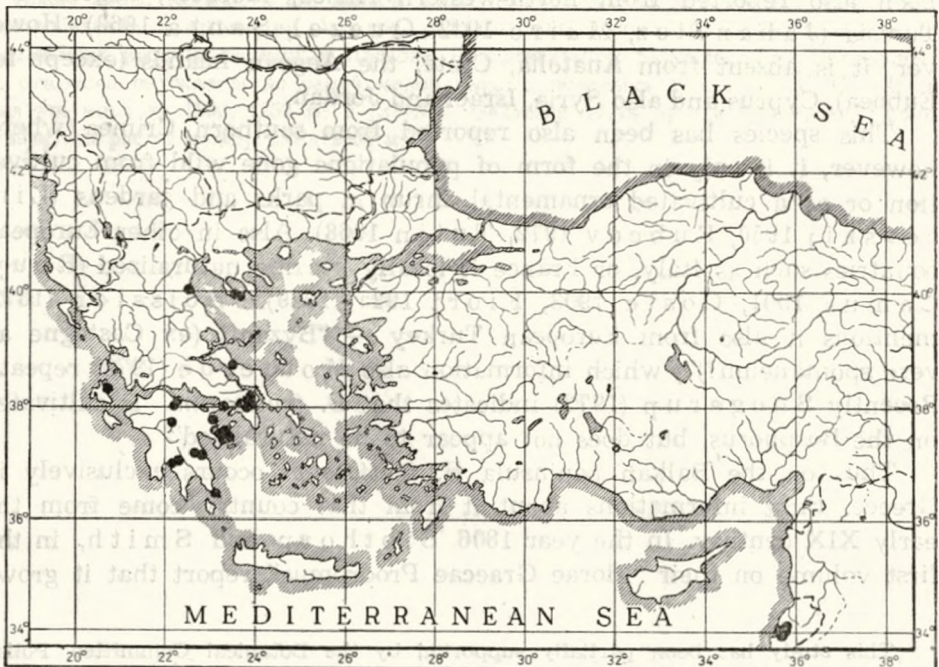


Fig. 1. Distribution of *Bupleurum fruticosum* L. in the eastern Mediterranean

and KOR.) I have prepared a point map of the distribution of *B. fruticosum* in Greece and in Lebanon (Fig. 1). In the latter case I based my information primarily on the data cited by Mouterde (1970). In Lebanon stands are concentrated in the western part of the country, northeast of Beirut.

As can be seen from the enclosed map of *B. fruticosum* distribution it occurs in the Eastern Mediterranean on rare scattered stands. Of particular interest is the considerable disjunction between the Greek stands and those in Lebanon, which in straight line amounts to 1000 km.

B. fruticosum is a shrub attaining 2-2.5 m in height, with much extended shoots, rod like, poorly branched, erect or recumbent on neighbouring bushes. It grows on stony, bare rocks, particularly limestone ones, in open places, among thickets of maquis and the phrygana and sometimes also in sparse pine forests. In Greece its stands are distributed between 200 and 900 m, at elevations (usually not higher than 600 m), in Lebanon, it appears, that it grows as high up as 700 m and on Corsica up to 1180 m (Briquet, 1938).

LOCALITIES

Herbarium specimens: Greece: Macedonia: Chalkidike: H. J. Kassandra, Hag. Paraskevi, 200 m, 21.6.1930, Mattfeld 5474 (W.); S part of Kassandra, SE of Paliourion, in compact maquis, 6.6.1979, Boratyński, Browicz, Zieliński 111 (ATH.KOR.); Evvoia: Ins. Euboea septentrionalis: Montes Kandili, in faucibus calc. ca 10 km ab Achmet Aga (Prokopion) austro-occidentetem versus, ca 300 m., 29.5.1955, Rechinger 16708 (G.W.); ibid. 20.7.1956, Rechinger 18174 (G.K.W.); Thessalia: Litochoron, 1940, Zaganiaris 427 (Herb. Univ. of Thessaloniki); Attiki: Malakasa, 350 m, 1919, Dimadis (Herb. Univ. of Thessaloniki); In rupibus montis Parnethos, 13.7.1848, Sartori (FL.G.W.); In m. Parnethis reg. med. pr. Tzurka, 12.9.1883, Heldreich s.n. (W.); In montibus Graeciae (ferquens), prope Athenas, 12-24.7.1849, Orphanides 237 (BM.C.FI.G.JE.K.LD.LE.W.); Mt. Parnis, 500 m, in macchies, Malakates 1240 (E.); Mt. Parnes, 700 m, scarce in *Quercus coccifera* maquis, 22.8.1962, Davis 39319 (BM.E.); Mt. Parnes. N. of Athens, rocky limestone slope, 6.5.1972, Hepper 4364 (K.); Mt. Parnis, on the way to Aj. Trias, in maquis, ca. 900 m, 1.6.1979, Boratyński, Browicz, Zieliński 28 (ATH.KOR.); In latere merid. montis Parnis, alt 650 m. In dumetis mediterraneis sempervirentibus, solo calcareo, 23.7.1971, Greuter 9490 (ATH.B.); In collibus ad orientem montis Parnis, inter Varimbombi et Sfendhali, alt. 500 m. In regione dumetorum mediterraneorum sempervirentium, solo glareoso, 21.10.1972, Greuter 10642 (ATH, B, G.); Ad radices montis Parnethi Atticae, supra Deceleiam, 500 m supra maris aequor. In fruticetis sempervirentibus, 21.10.1972, Greuter 10642 (B.B.M.G.LD.UPA.); Parnes, Prophete Elie, 30.8.1928, Guiol 184 (BM.); In fruticetis vallis Cephissi superioris prope Paphi, 22.7. et 26.9.1891, Heldreich 1144 (FI.G.JE.K.LD.SOM.W.); Prope Kephissiam, ad radices montis Pentelici, 650-1000', 8. 1869, Heldreich s.n. (BM.JE.W.); In valle Cephissi superior pr. Chelidonium, 23.8.1869 Heldreich s.n. (FI.K.W.); Valley of Cephissus near Koukourasonis, 800', 8.1932, Atchley 1482 (K.); Ad Bafi pr. Tatoi, 12.7.1925, Pinatzis (Herb. Pinatzis-Athens); Marathon, in declivibus juxta rivulum, 30.7.1939, Lindberg (LD.); Magara: ad radices Mt. Gerania, Ossios Ierotheros, 6.11.1955, Pinatzis (Herb.

Pinatzis-Athens); Korinthia: Ca 6 km NW of Sofiko (road from Korinthos to Epidauros), pine-forest with scrubby brushwood, E slope, ca 300 m, 9.9.1980, Boratyński, Browicz, Zieliński 830 (ATH.KOR.); Argolis: S of Phamarion (Ano Fanari). Only in one place on the slope above road to Kaloni, in scrub, 11.9.1980, Boratyński, Browicz, Zieliński 891 (ATH.KOR.); Ad sepes, ad fossas, Dariza, Poro contraria, supra Lemonodassos, 19.6.1955, Pinatzis (Herb. Pinatzis-Athens); Arkadia: In monte Malevo, Prope Platanos, 5 - 17.7.1856, Orphanides (W.); Near Ajos Petros (road to Aj. Ionnis) ca 850 - 900 m, rocky slope, 16.9.1980, Boratyński, Browicz, Zieliński, in observ.; Laconia: N of Neapolis, 2 - 3 km NNW of Kampos, 24.5.1964, Runemark, Snogerup 20773-B (LD.); Distr. Lakedhemona. Mt. Taygetos, W and by the village Tripi. Langadha valley, 520 - 550 m. Stony ground. On precipice by the side and above the main road, 8.8.1974, Stamatiadou 18031 (ATH.); ibid. 8.8.1974, Charpin, Dittrich, Greuter AC 10896, WG 12036 (G.U.P.A.); Taygetos, rochers calcaires dans la Langada de Trypi, 500 - 800 m, 29.8.1916, Maire, Petitmengin s.n. (W.); Langada gorge near Tripi, 29 - 30.5.1975, Polunin 12547 (U.P.A.); Taygeto Laconiae; in reg. infer. occidental. 6.1896, Zahn (W.); In m. Taygeto Laconiae, Psarides (G.); Langada, between Sparti and Kalamata, Mt. Taygetos, 29.6.1966, ? 5248 (U.P.A.); Messenia: ad confines Laconiae pr. Kalamata, 6.1896, Zahn (W.); Ca. 15 km NE of Kalamata, road to Sparti, in the deep valley of small river, 22.9.1980, Boratyński, Browicz, Zieliński, in observ.; W. Arkadia: Near Lefkohori, in the direction to Langadia (road Olimpias-Tripoli), on the steep slope among thicket, above and below the road, 26.9.1980, Boratyński, Browicz, Zieliński 1264 (ATH.KOR.); Achaia: Ad rupes calcareas vallis fluminis Voreikos prope Diakopto, Zaklorou, Mesgaspilaion, 19.8.1906, Maire, Petitmengin s.n. (W.); In faucibus fluvii „Voreikos” supra „Diakophto”, 5 - 600 m, 11.6.1926, Bornmüller 695 (J.E.L.D.W.); Triklia près Zachlorou, vallée de Boureikos, 20.7.1899, St. Lager s.n. (B.M.G.K.W.); Distr. Kalavrita: in faucibus fluvii Vouraikos infra pagum Zahlorou secus viam ferram, 550 - 600 m. In fissuris rupium calcarearum praeuptarum, 26.5.1964, Greuter 6771 (B.G.).

LITERATURE

Thessalia: In Thessaliae maritimis (Sibthorp, Smith 1806, 1819); Attiki: Mount Egaleo (Sarlis 1980); in valle Bucca pr. Oropos; pr. Panagia Pussia; pr. Adames (Halácsy 1900 - 1912); Argolis: pr. Poros (Halácsy 1900 - 1912, Rechinger 1943, 1961); Ithaca (Halácsy 1900 - 1912).

2. *LONICERA IMPLEXA* AIT.

Similarly as the previous species *L. implexa* is only woody representative of the genus in the eastern Mediterranean having evergreen leaves. Also the range of this species coincides to a large extent with the range of *Bupleurum fruticosum* L., however, in the western part of the Balkan peninsula it reaches much further north. On the other hand it is absent from Crete, Cyprus and continental Anatolia as well as Syria, Lebanon, Israel and Jordan. In the floristic literature (Post, Dinsmore 1932, Jahandiez, Maire 1934, Thiébaud 1940, Rikli 1946) the information is sometimes repeated that this climber occurs also in northwestern Anatolia (in Bithynia) and in Palestine. This however was



Fig. 2. Distribution of *Lonicera implexa* Ait. in the eastern Mediterranean

not confirmed in the floras published recently such as "Flora of Turkey" (Chamberlain, Long 1972), "Flora Palestina" (Feinbrun-Dotthan 1978) and "Nouvelle flore du Liban et de la Syrie" (Mouterde 1980).

In the western Mediterranean *L. implexa* occurs throughout southern Europe (including islands) and also in northwestern Africa, Morocco, Algeria and Tunisia, but it is absent from Libya. The most westerly stands are to be found on Flores Is. in the Azores archipelago (Eriksson et al., 1979).

Until recently *L. implexa* has been known from the Balkan peninsula only from Jugoslavia, Albania and Greece (Browicz, 1976), however in 1973 it has been discovered by Ertem (1976) in European Turkey. Three years later Seçmen and Leblebici (1978) have found another stand in Turkey, at 25 m elevation on Bozcaada (Tenedos) Is. located near the northwestern shores of Anatolia.

The distribution of *L. implexa* in Greece is restricted primarily to the shores and western islands (Thasos, Northern Sporades and Euboea) of the Aegean as well as to the shores of the Mediterranean and the Ionian islands. The list of such stands can be found in Halácsy's (1900-1912) and Rechinger's (1943) works. Similarly as in other regions *L. implexa* in Greece is associated with maquis communities and open, insolated locations, dry rocky slopes. It can be also found on edges

of sparse and dry pine forests. In its vertical distribution it can be found at already only a few meters and up to about 400 - 600 m, occasionally also as on Mt. Parnis even up to 900 m. In Albania it attains 600 m according to Mitruschi (1966), however, accurate information about the localisation of stands in the country is lacking (Fig. 2). In Jugoslavia according to Hayek (1931) and Rohlena (1941 - 1942) *L. implexa* grows on the coast and Adriatic islands of Croatia, Dalmatia and Montenegro. The most elevated stands have been reported from Africa where in the Atlas Mts. it was found at 2200 m (Jahandiez, Maire 1934).

LOCALITIES

Herbarium specimens: Greece: Thrace: Ca. 18 km N of Lutros (road to Pessani), destroyed maquis, 300 m, 21.6.1979, Boratyński, Browicz, Zieliński 546 (ATH.KOR.); Ca 13 km N of Lutros (road to Pessani), in small valley, 22.6.1979, Boratyński, Browicz, Zieliński 572a (ATH.KOR.); Ca. 3 km E of Makri, at the edge of the olive-tree plantation, 20.6.1979, Boratyński, Browicz, Zieliński 480 (ATH.KOR.); Between Makri and Dikella (W of Makri), maquis, 20.6.1979, Boratyński, Browicz, Zieliński 499 (ATH.KOR.); Makri, 2 km W of the village, 19.9.1966., Bauer, Spitzenberger 1167 (W.); Macedonia: Athos: östl. Karyes, 250 - 350 m, 23.8.1926, Mattfeld 2697 (K.); Athos, prope Prodomo, 7.1908, Dimonie (BM.WU.); Athos: Vatopedi, 18.12.1946, Vine (K.); Athos: ca 1 - 2 km W of Ouranopolis, maquis, 14.6.1979, Boratyński, Browicz, Zieliński 350 (ATH.KOR.); Calcareous slopes between Nea Roda and Ierissos, 13.6.1979, Browicz, in observ.; Ca 4 km N of Ierissos, 13.6.1979, Boratyński, Browicz, Zieliński 317 (ATH.KOR.); Chalkidiki, between Stratonion and Olimpias, maquis near sea, 15.6.1979, Boratyński, Browicz, Zieliński 374 (ATH.KOR.); SE Sithonia, small, rocky islet near Kalamitsi, 10.6.1979, Boratyński, Browicz, Zieliński 192 (ATH.KOR.); W side of Sithonia, between Paradissos and Neos Marmaras, maquis, 8.6.1979, Boratyński, Browicz, Zieliński 153 (ATH.KOR.); Chalkidiki: between Gerakini and Metamorphosis, ca 4 km before Metamorphosis, in *Quercus coccifera* scrub, 7.6.1979, Boratyński, Browicz, Zieliński (ATH.KOR.); between Skala Gerakinis and Polygyros, ca 420 m, 11.6.1979, Boratyński, Browicz, Zieliński 244 (ATH.KOR.); Imittos, 26.10.1967, Stamatiadou (ATH.); Prov. et distr. Thessaloniki, pr. Panorama, 350 m, in silva pini, 4.6.1973, Greuter (ATH.); Hortiath, Frivaldsky (BM.); S. Kassandra, ca 2 km NW of Paliourion, at the edge of pine forest., 5.6.1979, Boratyński, Browicz, Zieliński 90 (ATH.KOR.); 1 km S of Paliourion, 6.6.1979, Browicz, in observ.; Thessalia: Sikl, 250 m, 16.5.1972, Raus (ATH.); Sporades: Psathura, 6.6.1966, Phitos 4933 (UPA.); Ins. Skiathos, pr. monast. Evangelistria, 22.9.1966, Phitos 5404 (UPA.); N Skiatos, 1969, Stamatiadou (ATH.); Euboea septentr., inter Limni et Strophylia, subst. calc., 200 - 400 m, 29.5.1955, Rechinger 16560 (W.); Euboea: prope urbem Kymi, 16.5.1966, Phitos s.n. (UPA.); Attiki: Kalamos, Agion Apostolou, 31.5.1970, Stamatiadou (ATH.); Laurion, 1885, Haussknecht (JE.); On the slope of Mt. Parnes, road to Aj. Trias, maquis, ca 900 m, 1.6.1979, Boratyński, Browicz, Zieliński, 29 (ATH.KOR.); Parnes: Baribompi, 1928, Guiol 163 (BM.); In reg. sempervir. mt. Parnethis, 1000 - 2000', 1857, Haussknecht (JE.); Mt. Pentelicon, 1885, Haussknecht (JE.); In m. Hymetto orient., 5.1848, Heldreich (BM.K.); Pikerimi, 26.5.1912, Abel (WU.); Ep. Kithira: Tal b. Perati östl. Fratsia, 120 m, 13.5.1964, Greuter 6589 (W.); Ekale mt., Kephissia, pine woods, 1200 - 1300', 6.1932, Atchley 1448, 1609 (K.); Prov. et distr. Attiki: ad septentr. pagi Rafina ad balnea maritima Kokkino Limanaki, 2 - 15 m, 9.6.1972, Greuter (ATH.); Korinthia: ca 5 - 6 km S of Kato Almyri, 9.9.1980, Browicz, in observ.

Ca 6 km NW of Sofiko (road from Korinthos to Epiaduros), pine forest, ca 300 m, 9.9.1980, Boratyński, Browicz, Zieliński 837 (ATH.KOR.); Argolis: Between Adamion and Trachia, ca 400 m, 10.9.1980, Boratyński, Browicz, Zieliński 869 (ATH.KOR.); Methana, 1885, Haussknecht (JE.); Lakonia: between Lira and Eliniko (road Monemvasia-Neapolis), 18.9.1980, Boratyński, Browicz, Zieliński 1048 (ATH.KOR.); Eliniko, deep gorge on the N side of the village, 18.9.1980, Boratyński, Browicz, Zieliński 1054 (ATH.KOR.); Between Demonia and Talada (road Neapolis-Molai) thickets in the stream valley, 18.9.1980, Boratyński, Browicz, Zieliński 1065 (ATH.KOR.); Inter oppidum Gythion et pagum Krokees, 11.5.1979, Tzanoukadis, Iatrou 5722 (UPA.); Messenia: between Lagada (Langada) and Agios Nikolaos (Aeropolis-Kalamata), deep valley, 19.9.1980, Boratyński, Browicz, Zieliński 1089 (ATH.KOR.); Ca 2-3 km W of Prosilio, road to Kalamata, maquis, 20.9.1980, Browicz, in observ.; ca 16-18 km NE of Kalamata, road to Sparti, 22.9.1980, Boratyński, Browicz, Zieliński 1146 (ATH.KOR.); Kalamata-Sparti, valley of the river Nedonas, ca 250 m, 22.9.1980, Browicz in observ.; W Elida: near Loutra, *Pinus halepensis* forest on the maritime dunes, 25.9.1980, Boratyński, Browicz, Zieliński 1232 (ATH.KOR.); Ins. Zakynthos, Oros Skopos, ca 380', 15.5.1968, Stamatiadou (ATH.); SW Akarnania, ca 3 km S of Ellinika (N of Mesolongi), ca 500 m, 19.9.1981, Boratyński, Browicz, Zieliński 1557 (KOR.); N. Akarnanika, between Thyriion-Vustrion-Tryphos, ca 400-600 m, 17.9.1981, Boratyński, Browicz, Zieliński 1530 (KOR.); NE Akarnania, between Ag. Nikolaos and Lefkada, maquis on the slopes near sea, 15.9.1981, Boratyński, Browicz, Zieliński 1494 (KOR.); Ins. Levkas, 15.5.1878, Spreitzendorfer (WU.); Lefkas: between Fterno and Marandochorion, 15.9.1981, Boratyński, Browicz, Zieliński 1502 (KOR.); Lefkas: between Ag. Petros and Hortata; between Hortata and Exanthia, 15.9.1981, Boratyński, Browicz, Zieliński (in observ.); W. Epiros: maquis on the slope, ca 4-5 km S of Plataria (direction of Karterion), 13.9.1981, Boratyński, Browicz, Zieliński 1441 (KOR.); W. Epiros: Suvota SW of Igmentisa, maquis near sea, 13.9.1981, Boratyński, Browicz, Zieliński 1440 (KOR.); Ins. Corfu, von Anaphades-Perivoli, 8.5.1878, Spreitzendorfer (WU.); Ins. Corfu, west coast, Glytada, 8.1962, Bally (K.).

Turkey: Tekirdag: Malkara to Inecik, in macchie, 27.5.1973, Ertem 25105 (KOR.); Çanakkale: Bozcaada, S of Susubahçe, in macchie, ca 25 m, 7.8.1976, Leblebici, Seçmen, 2163 (KOR.).

LITERATURE

Albania: maquis, 0-600 m (Mitrushi 1966).

Greece: Ins. Thasos, near Kastron; between Limenaria and Skala Maries (Stojanoff, Kitanoff 1945-1946); Sithonia: Kalkfelshänge am Hafen Kuphos, Mattfeld 5375 (Rechinger 1943); Mytilene: Fluss Ligonias, Camp. Jerae, Candagry (Rechinger, 1943); N. Sporaden: Skopelos (Rechinger 1943, Phitos 1967); Alonnisos (Phitos 1967); Boetotia: pr. Kokosialesi, Unger (Halácsy 1900-1912); Thessalia: Liri, Metochi, Xinovrisi, Potistika, Lafkos, Argalasti, Promiri, Neochori, Afete, Lefkokastro, Platania, Katigiorgi, Kastri Platantias, Siki, Agia, Kerasea, Mavrovouni-Ostküste oberhalb Kamari, Chorton, Kalamaki (Raus 1979); Skyros (Halácsy 1900-1912, Rechinger 1943); Attiki: Mt. Egaleo (Sarlis 1980); Athen- Akropolis u. Philopappos, 150 m; Insel Aegina, Umgebung des Tempels der Aphaia bei Agia Marina, lichter *Pinus halepensis*-Wald (Merxmüller, Podlech 1967); Argolis: Insula Poros (Halácsy 1900-1912, Rechinger 1943); Lakonia: Mystras, Trypi, Anavryti (Schouten, 1979); Elida: Lintzi, Heldreich (Halácsy 1900-1912) Ins. Zakynthos: tantum reperi prope mare et in Insula Peluso (Margot, Reuter 1839-1841); Cephalonia: pr. Same, Heldreich (Halácsy 1900-1912); Achaia: ad sinum Corinthiacum (Halácsy 1900-1912); Ins. Corfu: Gasturi (Halácsy 1900-1912).

SUMMARY

On the basis of herbarium materials, data from literature and own field observations the author has described the eastern part of the range of two Mediterranean woody species and has listed their stands.

The first species, *Bupleurum fruticosum* L. is an evergreen shrub 2 - 2.5 m tall occurring on the Balkan peninsula (Greece exclusively) and Euboea and after a disjunction of about 1000 km in Lebanon, northeast of Beirut. It grows primarily in maquis type communities, on few widely scattered stands, at elevations between 200 and 900 m.

The second species, *Lonicera implexa* Ait. is an evergreen climber known in the eastern Mediterranean from Jugoslavia, Albania, Greece, European Turkey and Bozcaada Is. on the northwestern coast of Anatolia. Similarly as *Bupleurum fruticosum* L. it enters into maquis and is also found on edges of sparse dry pine forests, almost from the sea shore itself to about 400 - 600 m elevation and occasionally up to 900 m.

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KAZIMIERZ BROWICZ

Bupleurum fruticosum L. i *Lonicera implexa* Ait.
we wschodnim Śródziemnomorzu

Streszczenie

Na podstawie materiałów zielnikowych, danych z literatury oraz własnych obserwacji terenowych autor opracował wschodnią część zasięgu dwóch śródziemnomorskich gatunków krzewów oraz zestawiał ich stanowiska.

Pierwszy gatunek, *Bupleurum fruticosum* L., jest zimozielonym krzewem o wysokości 2-2,5 m, który występuje z jednej strony na Półwyspie Bałkańskim (wyłącznie w Grecji) i na Eubei, a z drugiej strony dopiero po około 1000 km dysjunkcji w Libanie, na północny-wschód od Bejrutu. Rośnie przede wszystkim w zbiorowiskach typu makii, na nielicznych, rozproszonych stanowiskach, na wysokości mniej więcej od 200 do 900 m. n.p.m.

Gatunek drugi, *Lonicera implexa* Ait. jest zimozielonym krzewem pnącym i znany jest we wschodnim Śródziemnomorzu z Jugosławii, Albanii, Grecji i europejskiej Turcji oraz z wyspy Bozcaada położonej u północno-zachodnich wybrzeży Anatolii. Podobnie jak i *Bupleurum fruticosum* L. wchodzi w skład makii, a także spotykany jest na pobrzeżach widnych i suchych lasów sosnowych, nieomal od samych wybrzeży morskich po 400-600 m n.p.m., a wyjątkowo tylko do 900.

КАЗИМЕЖ БРОВИЧ

Bupleurum fruticosum L. u *Lonicera implexa* Ait. в восточном Средиземноморье

Резюме

На основании гербарных материалов, литературных сведений и собственных полевых наблюдений автором разработана восточная часть ареала двух средиземноморских древовидных видов, а также составлены их местообитания.

Первый из них *Bupleurum fruticosum* L. является зимозеленым кустарником высотой в 2-2,5 м. Он встречается с одной стороны на Балканском полуострове (исключительно в Греции) и на Евбее, а с другой стороны только после 1000 км дисъюнкции в Ливане, к северо-востоку от Бейрута. Этот вид растет преимущественно в сообществах типа макии, в немногочисленных разбросанных местообитаниях, на высоте от 200 до 900 м над ур. моря.

Второй вид *Lonicera implexa* Ait. является зимозеленой древовидной лианой, известной на восточном Средиземноморье в Югославии, Albanii, Греции, европейской Турции и на острове Возцаада у северо-западного побережья Anatolii. Также как и *Bupleurum fruticosum* L. этот кустарник входит в состав макии, а также встречается по опушкам, светлых и сухих сосновых лесов, почти от морского побережья до 400-600 м над ур. моря, в виде исключения до 900 м.

КАЗИМЕЖ БРОВИЧ