

KAZIMIERZ BROWICZ

## Distribution of woody *Rosaceae* in W. Asia XI

*Crataegus aronia* (L.) Bosc. ex DC.

*C. aronia* (L.) Bosc ex DC. Prodr. 2 : 629 (1825)

Syn.: *C. azarolus* L.  $\beta$  *aronia* L., Spec. Pl. 477 (1753): *C. azarolus* (non L.) auct. plur. Fl. Or.; *C. chrysoclada* Gandgr. Fl. Cret.: 35 (1916); *C. azarolus* L. subsp. *aronia* (L.) H. Riedl, in K. H. Rechinger Fl. Iranica 66 : 56 (1969).

Arbor ad 8 m alta, spinosa, ramis hornotinis tenuibus, tomentosus, folia firma glauca, utrinque breviter pubescentia demum, praecipue subtus, fere glabra, folia superiora ramorum fertilium 2 - 3.5 (5) cm longa, 1.5 - 3.2 cm lata, profunde 3 - 5 lobata vel subpartita, lobis obtusatis, mucronatis, nonnunquam breviter acutis, integerrimis vel apice 1 - 3 dentatis, raro inaequaliter inciso-dentatis (icon.: Pococke t. 85; exs.: Bornmüll., no. 1026). Inflorescentia tomentosa, 2 - 3.5 cm diam., compacta: flores 15 - 18 mm diam., sepala late triangularia acuta, styli 2 - 3, fructus globosi, vel ovato globosi, plerumque 12 - 13 (20) mm in diam., lutei, 2 - 3 pyreni; pyrenae dorso convexae, latae, pauce costatae, ventre planae vel carinatae, hypostyli triangulari (acc. to P o j a r k o v a, 1939).

*Crataegus aronia* is one of the more characteristic hawthorns occurring in southwestern Asia. Although it is relatively easily distinguished from other closely related species from that region, the question of its name is still controvertical. Both in herbarium collections and in the floristic literature almost to about the same extent another name is used for it namely *C. azarolus* L. Some authors believe, that these are two, independent species, while others consider the names as synonyms, and usually they consider the name *C. azarolus* as being the older one and therefore give it priority. These controversies concern not only older literature but are also voiced in the most recent works. For example Meikle (1966) for Iraq, Franco (1968) for Europe and Mouterde (1970) for Syria and Lebanon use the name *C. azarolus*, while Riedl (1969) for Iran and Iraq uses the name *C. azarolus* subsp. *aronia* and Browicz (1972a) for Turkey calls it *C. aronia* (Fig. 1).

With all this is associated an absence of detailed information on its geographic distribution. According to Diapulis (1933) both *C. azarolus* and *C. aronia* occur in western Asia and on Crete, according to Franco



Phot. K. Jakusz

Fig. 1. A herbarium specimen of *Crataegus aronia* from Turkey (Royal Botanic Garden, Edinburgh)

(1968) *C. azarolus* grows in southern Europe, but only as a cultivated and domesticated plant and in the wild state as var. *aronia* in Crete.

The first and so far the only attempt at clarifying these complex questions of nomenclature in the taxa has been undertaken by Pojarkova (1939), however her work is little known which presumably has been caused by the fact that it has been published just before the war. Her line of thinking is as follows. Linnaeus in his "Species Plantarum" (1753), has recognized both *C. azarolus* and its variety  $\beta$  *Aronia*. After a general diagnosis "*Crataegus foliis obtusis, bitrifidis, subdentatis*" Linnaeus quotes for the type species the name taken from Bauhin



Fig. 2. The illustration of *Crataegus azarolus* L. (acc. to Pojarkova, Jour. Bot. USSR, 24, 5, 1939)

from his "*Pinax theatri botanici*, 453" and from "*Historia plantarum*, 1: 67". In the first case Bauhin says: "*Mespilus apii folio laciniato*", and in the second: "*Mespilus Aronia veterum*". As regards the variety " $\beta$  Aronia" Linnaeus has used the diagnosis of P o c o c k e (Orient. 189, t. 85) "*Mespilus orientalis apii folio, subtus hirsuto*". At the same time P o j a r k o v a points out that the diagnosis of P o c o c k e is somewhat wider and contains the following expression "*fructu magno luteo*". This description of the colour of the fruit is of considerable significance for the further conclusions of P o j a r k o v a.

Since the diagnosis of Linnaeus is very short P o j a r k o v a has

looked into Bauhin, whom Linnaeus quotes. From the detailed description, on 5 pages, it is clear that Bauhin in "Historia plantarum", under the name "Mespilus Aronia", that is for the plant that Linnaeus calls *C. azarolus*, understood a species of hawthorn with red fruit (*fructu fert rotundum, rubrum*), similar to *C. monogyna* and *C. oxycantha* (*Mespilus Aronia foliis ad spinum album; Spina alba* — the name given for the two species referred to above). Combining this information with the diagnosis of Pococke it becomes clear that *C. azarolus* has red fruit and  $\beta$  *Aronia* yellow ones.

The whole question would therefore appear to be simple if it were not for the later interpretation of Spach (*Histoire naturelle des végétaux, Phanerogames, II, 1834*). He recognizes two species of hawthorns with big fruits, one of which he calls "néflier azérolier — *Mespilus Azarolus* L." and identifies it with the *C. azarolus* of Linnaeus, and the other "néflier faux-azérolier" corresponding to *Mespilus Aronia* Willd. According to Spach his *Mespilus Azarolus* has large, light yellow fruit with a slight red flush and with 2 - 3 stones, thornless shoots and large leaves downy on the dorsal side as well as compact inflorescences on a short axis, while "*Mespilus Aronia*" has smaller fruit, crimson in colour, with two stones, loose inflorescences and armed shoots. Thus Spach has not only treated the discussed taxons inversely as Linnaeus, but he has also mixed their morphological characters.

The view of Spach has had a considerable influence on later studies in spite of the fact that before Spach DeCandolle (*Prodromus* II: 629, 1825) has clearly distinguished *Crataegus azarolus* L., the fruit of which is "*globosus occineus saepius 2-spermis, unde nomen vulg. Monspessulanum* Pommettes de doux closes" which occurs in sparse woods of southern France and in Italy, and *C. Aronia* (Bosc, *ined.*) with "*Fructus dicitur flavus*" occurring in the East (*in Oriente*). The latter description of the origin of *C. aronia*, agrees with the view of Pococke, who has made an illustration of the species on the basis of a specimen raised in England from seeds collected in Palestine (Pojarikova, 1939).

All these inconsistencies could be best untangled by the herbarium type specimen (particularly if it had fruits) of *C. azarolus*, however, as Pojarikova reports it has not been retained until modern times and in the herbarium of Linnaeus it is substituted by another species of hawthorn originating from America with large wide leaves, with very shallow but sharp lobes and a sharply serrate leaf blade.

Basing on the conclusions presented above Pojarikova has prepared an extensive Latin diagnosis of *C. azarolus*, which I quote below:

*C. azarolus* L., Spec. Plant. 477 (1753). Syn.: *Mespilus azarolus* Poir. in Lam. Ecycl. méth. 4:438 (1797); *Mespilus Aronia* Spach, Hist. vég. 2:69 (1834); *Crataegus maroccana* Lindl., Bot Regist. 22 tabl. 1855 (1836); *Mespilus azarolus* var. *erythrocarpa* Moris, Fl. Sard. 2:44 (1840 - 1843);

*Crataegus ruscinonensis* Gren. et Blanc. in Billotia 1 : 71 (1864 - 1866); *Crataegus azarolus* var. *ruscinonensis* Fiori, Fl. d'Ital. 1 : 785 (1923 - 1925).

Arbor ad 6 m alta, ramis inermibus vel spinosis, hornotinis tenuibus pubescentibus vel subtomentosis. Folia adulta glabra vel supra sparse adpresse pilosa, petiolis laminis 2.5 - 6-plo brevioribus, ambitu ovato-cuneata vel rhomboidea; ramulorum fertilium folia inferiora apice grosse dentata vel triloba, non raro elongata, caetera profunde triloba, lobis lanceolatis, ca. 2.5 - 1, mucronulatis, integris vel apice 1 - 3 dentes gerentibus, lobo medio non raro tripartito, incisuris fere in medio laminae dispositis. Inflorescentia composita, satis laxa, 8 - 12-flora, pedunculis, pedicellis, sepalisque pubescentibus; hypanthium subtomentosum, pedunculi 3 - 5 cm longi, sepala late triangularia, in fructu reflexa, acuta, styli plerumque 2 (1 - 3). Fructus subglobosi, ca. 12 (ad 15) mm in diam., lateritii vel rubri, 2 (1 vel 3) - pyreni (Fig. 2).

According to Pojarkova *C. azarolus* L. occurs only in southern France (without the eastern part — Maritime Alps) and in Italy. The reports from Spain and Algeria are probably doubtful. It is interesting that the herbarium collections of this species are rare and as a rule were made in the first half of the XIX century, while Pojarkova herself has only seen a few. Besides *C. azarolus* L. Pojarkova has described another European species of hawthorn with large fruit but with yellow ones, and she has called it *C. linnaeana* Pojark. It grows in Sicily, in southern and central Italy and possibly also in southern France, while in southern Spain and on Sardinia it is probably only in cultivation or gone wild. In "Flora Europaea" it has however been omitted by Franco (1968).

Considering the morphological characters of *C. azarolus* and *C. linnaeana* Pojarkova admits that there exists the possibility that *C. azarolus* is only a hybrid between the latter, a yellow fruited hawthorn and the red fruited *C. monogyna*, and she refers also to a similar view expressed in the previous century by Planchon (Le *Crataegus Aronia* (Spach.) dans ses rapports avec l'Aubèpinex et l'Azerolier d'Italie, Comptes rendus Acad. Paris 74, 1872). Recently also Poletiko (1954) has expressed the view that it is such a hybrid. If this proved true, then it would be easy to understand such morphological characters as: variable number of stones (1 - 3), colour of the fruit, loose inflorescence structure of *C. azarolus*.

However still the position of the yellow fruited European *C. linnaeana* remains unclear — is it a wild species or is a cultivated form. According to Pojarkova it is characterized by large leaves (up to 7.5 cm long and 5.5 cm wide), and thick shoots without thorns. Pojarkova contrasts these characters with those of *C. aronia*, which has leaves 3.5 (5) cm long and up to 3.2 cm wide and the shoots are armed. It appears that the latter character is a relative one. While looking

through rich herbarium collections of *C. aronia*, from various parts of its range (as is usual for woody plants, they are not full, usually represented on a sheet by only one or two twigs) I came to the conclusion that in *C. aronia*, similarly as in several other species from the sub-family *Maloideae* (e. g. *Pyrus communis*), thorns are well visible in young specimens and in those growing wild, while old trees and the cultivated forms have none or almost none. It is not unlikely therefore that *C. linnaeana* represents only a selected cultivated form of *C. aronia*, introduced into cultivation centuries ago, possibly by the Arabs in IX - X century into Sicily (or even into Spain). This could be an explanation for the similarity of the Arabic name for the yellow fruited hawthorn used throughout south western Asia, "zarur" with the Italian name: "azzarolo, lazzarolo, azzaruolo" or else the French name "azarole, azérole or azérolier". Even today the yellow fruited form of hawthorn is cultivated for consumption purposes in places of Iraq (Meikle, 1966), Syria and Lebanon (Mouterde, 1947).

*C. triloba* Poir. from northwestern Africa (mountains of Tunisia, Algeria and Morocco) is also a thornless, yellow fruited hawthorn related to *C. aronia*. It differs from *C. linnaeana* in having much smaller leaves (up to 4.5 cm long and 3 cm wide) with a blade serrate only at the top or provided with very shallow lobes pointing upwards (*C. aronia* usually has deeply lobed leaves).

Contrasting the European *C. azarolus* of Linnaeus with the Asiatic *C. aronia*, Pojarkova has recognized within the section *Azaroli* Loud. a separate series of species, with she has called *Ponticae* Pojark. She has included in the series besides *C. aronia* the species mentioned above *C. linnaeana* and *C. triloba* as well as *C. pontica* C. Koch. This latter hawthorn occurs on a few stands in Turkey, in eastern Transcaucasia, in northern Iran, in the mountains of Kopet-Dagh in Turkmenia and in Middle Asia (Pamir-Alai, western Tien-Shan). This species also used to be considered as *C. azarolus* and similarly as *C. triloba* and *C. linnaeana* it is to be devoid of thorns.

Thus according to Pojarkova in the series *Ponticae* only *C. aronia* has thorny shoots. She claims that the range of the species covers Palestine (*locus classicus*), Syria, Cyprus, Rhodos, Crete, southern Turkey, southwestern Iran and northern Iraq. In spite of the limited number of herbarium specimens Pojarkova had access to, it is striking how good was her judgement concerning the geographic distribution of the species, though of course a detailed delimitation of the range was out of the question at the time.

Basing on the conclusions presented above and on the rich herbarium materials quoted below, as well as on the information from the literature (assuming that *C. azarolus* of southwestern Asia corresponds to *C. aronia*) I have prepared a point map of the distribution of *C. aronia* (Fig. 3).

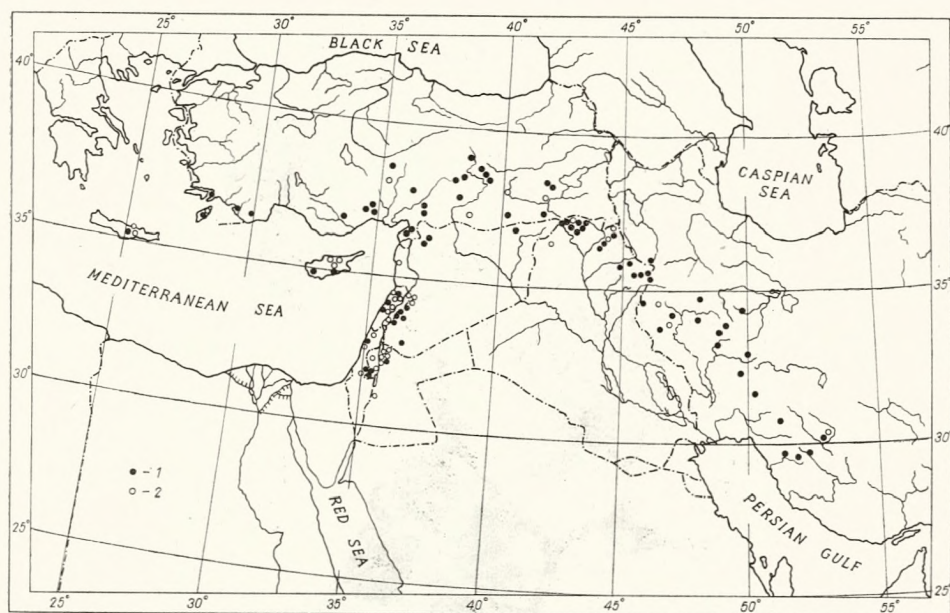


Fig. 3. The distribution of *Crataegus aronia*: 1. herbarium specimens, 2. literature

In some cases on the basis of the available knowledge about the range I was hesitant in accepting some of the literature quotations, and to be on the safe side I have not included these on the map. Thus I have not included the stand reported by Birand (1952) from Beykoz near Istanbul; neither from that place nor from anywhere in the vicinity has *C. aronia* been mentioned. I have also left out several stands reported in Paphlagonia, from the vicinity of Ankara (Krause, 1934; Czeczott, 1939; Bornmüller, 1940; Birand, 1952), since from that region I have not seen a single herbarium specimen that would confirm the observations. They do not have a link with the main part of the range of *C. aronia* and one can suspect that they belong to some completely different species, such as the original variety *C. orientalis* Pall var. *obtusata* Browicz (Browicz, 1972b). To this variety belongs the herbarium specimen of Sintenis (no. 4464) from Tossia, which has in fact been described by Bornmüller (1940) as *C. azarolus*.

Then basing on the opinion of Pojarkova about the range of *C. pontica* (a species related to *C. aronia*) I have also omitted the reported stands from northern Iran and from Turkmenia, assuming that they belong to *C. pontica*. It is possible that also some of the published reports of *C. aronia* from Jordania, Israel and Syria concern *C. sinaica* Boiss., a species very similar to *C. aronia* in leaf shape. However if such were the case the range of *C. aronia* would not be affected, since the herbarium collections I have seen sufficiently delimit it. The range, being very similar to that of *Pyrus syriaca* Boiss., indicates clearly that



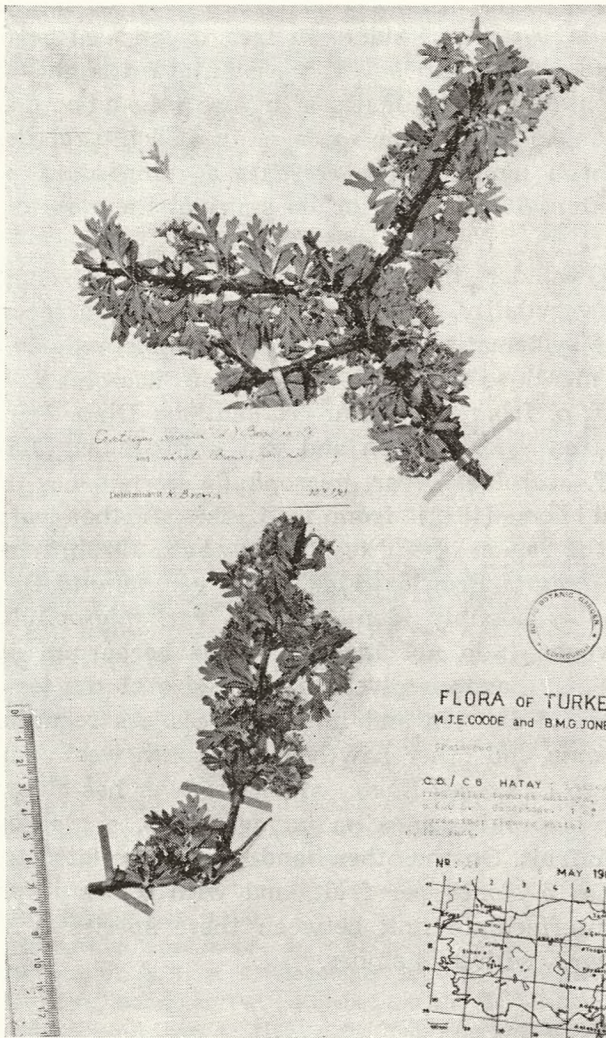
Phot. K. Jakusz

Fig. 4. *Crataegus aronia* var. *dentata* — type specimen (Royal Botanic Garden, Edinburgh)

*C. aronia* is an eastern-Mediterranean species, which on the one hand has a link with southern Europe and north-western Africa (*C. linnaeana* and *C. triloba*) and on the other with the Caucasus and Central Asia (*C. pontica*).

In its vertical distribution *C. aronia* is characterized by a considerable range of stands. The lowest stands are located even below 100 m elevation while the upper most ones reach 2000 m (Zagros Mts., M. et D. Zohary, *in sched* 1064), most commonly however this hawthorn occurs at medium mountain elevations between 600 and 1600 m. Only





Phot. K. Jakusz

Fig. 5. *Crataegus aronia* var. *minuta* — type specimen (Royal Botanic Garden, Edinburgh)

in Iran where *C. aronia* attains its highest elevations the majority of known stands have been found at elevations above 1200–1400 m. It grows primarily on a calcareous, rocky substratum, though it has also been found growing on sandstone and basalts. It is a common component of sparse woods and oak thickets, and thanks to its considerable potential for coppicing it will remain in many places even after complete destruction of these communities. Sometimes its participation in oak forests is considerable and as has been reported by Kasaplilgil (1956b) in Jordan in an oak forest in the mountains of Ajlun, 5 km east of Staaina

Forest Station, *Quercus infectoria* comprises 69<sup>0</sup>/<sub>0</sub>, *Q. coccifera* 30<sup>0</sup>/<sub>0</sub> and *Crataegus aronia* 1<sup>0</sup>/<sub>0</sub> of the stand. In Iraq it can also be found in pine forests (Meikle, 1966). It is very resistant to draught, and therefore it frequently enters regions of desert nature (Mouterde, 1947). Here and there it can be found near roads or in agricultural fields, where it has possibly been planted or represents a remnant of the destroyed natural vegetation. The reason for its survival there is to be sought in the edible fruit.

It is little wonder therefore that *C. aronia* is characterized by a considerable variability. Several varieties have been recognized within it, however the systematic value of these is problematic as a rule. Diapulis (1933) mentions four such varieties: *C. azarolus* L. var. *chrysolada* (Gdgr.) Diap. from Crete, var. *rotundiloba* Diap. from Israel, var. *hastata* Diap. from the Lebanon and var. *kurdistanica* Diap. from Iraq. One variety, *C. azarolus* L. var. *microphylla* Bornm. has been described by Bornmüller (1911) from Iran. Two further varieties I have described for the region of Turkey (Browicz 1972b) namely *C. aronia* (L.) Bosc var. *dentata* Browicz (Fig. 4) and var. *minuta* Browicz (Fig. 5). The latter one is possibly identical with var. *microphylla* of Bornmüller, however I do not know its type herbarium specimen, and Bornmüller's diagnosis gives only the size of the leaves, not mentioning the size of flowers and inflorescences. As regards the relation between *C. aronia* and other hawthorns of south west Asia, the species is closely akin to *C. sinaica* Boiss., which however has glabrous leaves on both surfaces, less pubescence on young shoots, a glabrous calyx and 1-2 stones per fruit. On the other hand it is also related to *C. orientalis* Pall., which has 5 stones per fruit, and with which it probably gives hybrids. An intermediate link between these species is the hawthorn *C. szovitsii* Pojark. with 2-4 stones.

### Localities

1. **Crete.** Herbarium specimens: Ad Anestas distr. Malevisi, 4.6.1899, c. fr., Baldacci, 72 (W.); In silvaticis supra Visari ad basim m. Ida, distr. Amasi, 12. 8. 1893 c. fr., Baldacci 183 (W.); Distr. Malevyzi: in collibus siccis ad Gari, 25.6.1942 c. fr., Rechinger 13981 (W.).

Literature: In monte Ida, supra Kato-Asides distr. Malevesi, 10. 8. 1870 c. fl., Heldreich (Diapulis, 1933; Pojarkova, 1939); M. Ida bei Daphnas; Gorgolaino; Prinias; Malevyzi: Paleokastro bei Rodi; M. Ida oberhalb Kato Arides; Kap Dia (Rechinger, 1943).

2. **Turkey.** Herbarium specimens: Mugla: d. Marmaris: Bayir, 200-300 m, Rocky limestone slopes, 15. 4. 1965 c. fl., Davis 41136 (E); Vil. Mughla, Baba dağ between Akbel yayla and Ovajik (above Fethiye), 3,500, 30.7.1949, Davis, 13964 (K.); 5 mi. W. of Summit (Summit 30 mi. W. of Elmayli — S of Antalya), 4.6.1961 c. fl., Stutz 1512 (W.); İçel: Mut: Magras Dağ. Limestone slopes, 1100 m, 11.5.1965 c. fl., Coode, Jones 750 (E.); Giosna, 1000 m, 6.1895 c. fl., Siehe 69 (E.K.WU.); In monte

Tauro, 1836, Kotschy 190 (W.); Ad inclytas angustias „Güllele Boghas” in regione montana, alt 3800', 1853, Kotschy, s.n. (W.); Prov. Mersin distr. Tarsus: gorge of Tarsus river between Ulaş and Şamlar, 150 m. Rocky limestone slopes, 5. 4. 1957 c. fl., Davis, Hedge 26421 (E.K.); Erdschias-dagh (Argaeus) auf Abhängen des Ali-dagh, c. 1600 m, 6. 1902 c. juv. fr., Zederbauer (WU.); Akher Dagh, Marash to Zeytun, 8. 5. 1934 c. fl., Ball 991 (E.K.); Marash, 500 m, 17. 2. 1916 c. fl., Meinke 67 (B.); About 60 km S. of Maras. Remnants of Maquis, 20. 7. 1962, M. et D. Zohary 1072 (HUJ.); Armenia turcica, Egin: Altikoi 20. 5. 1890 c. fl., Sintenis 2342 (W.WU.) About 40 km W of Malatia. Grey brown soil. Overgrazed steppe, 28. 7. 1962 c. fr., M. et D. Zohary 2811 (HUJ.); About 35 km W of Malatia. Steppe 'Wild Orchards', 28. 7. 1962 c. fr., M. et D. Zohary 2824 (HUJ.); Adiyaman. Single scattered trees in cultivated fields along the road to Kahta; 20 kilometres from Adiyaman, 5. 6. 1968 c. fr., Alava 7000 (E); Charput, 4000', 1865, Haussknecht (K.); Between Elazig and Diarbekir, near Lake Hazar, fallow field, 1200 m, 18. 6. 1964 c. fl., Zohary, Plitman 18603-6-17 (HUJ.); Prov. Elazig. Hazar Gölü, c. 1135 m. Among *Quercus* sp., beside lake, 8. 8. 1956 c. fr., McNeill 474 (E.K.); Env. of Elazig, forest remnants 1200 m, M. et D. Zohary 2011 (HUJ.); Distr. Elazig. 5 km N. of Elazig, 1315 m, 4. 7. 1963 c. juv. fr., Orshan, Plitman 47822 (HUJ.); Prov. Mardin: 5 km. E of Mardin. Rocky limestone slopes. 25. 5. 1957 c. fl., Davis, Hedge 28585 (E.K.); Kurdistania media: Taurus Armenicus. In valle Sassun districtus Bitlis inter vicos Deled et Rabat, substr. calcareo, ca. 900 - 1200 m, 8. 8. 1910 c. fr., Handel-Mazzetti 2678 (W.WU.); Prov. Bitlis. Bitlis gorge below Tutu south of Kambos Dag, 1250 m. Oak scrub, 16. 8. 1956 c. fr., Mc. Neill 602 (E.K.); Bitlis: Halfway between Baykan and Bitlis, 1250 m, 18. 5. 1966 c. fl., Davis 43163 (E.); Mardin: 3 km W of Idil, 700 m. Relict in fields, 13. 5. 1966 c. fl., Davis 42873 (E.); In collinis versus Beilan, 200', 17. 4. 1859 c. fl., Kotschy 503 (W.); Hatay: 5 miles from Belen towards Antakya, c. 600 m. Sandstone. 6. 5. 1965 c. fl., Coode, Jones (E.); Taurus orientalis: in monte Amanus 1000 - 1100 m, 17. 2. 1916 c. fl., Meinke 71 (B.); Armenia: Airan, 11. 5. 1914 c. fl., Fölg (W.).

Literature: In monte Argaeo, Balansa (Tchihatcheff, 1860; Boissier, 1872); Bulgardagh: valle Bulgarmaaden, Balansa (Tchihatcheff, 1860); Ala Dag, Ceyusli Yelatan, 1400 m, 21. 9. 1938, no. 918 (Bornmüller, 1941); Ad Orfa et Diarbekir, Haussknecht (Boissier, 1872); Kjachta, an Wasserläufen; Am Tigris zwischen Sert und Dschesire (Handel-Mazzetti, 1913).

3. **Rhodos.** Herbarium specimens: In collibus siccis inter Kalitea et Asguru ca. 100 m. 5. 7. 1935 c. fr., K.H. et F. Rechinger 8587 (W.); Vallée entre Salakos et Dimilia, 10. 6. 1870 c. fl., Bourgeau (W.); Rhodini, on the S. outskirts of Rhodos city, *Quercetum macrolepis* sandstone, 2. 5. 1961 c. fr., Feinbrun 274 (HUJ.).

Literature: Zwischen Rodi und Koskino; Asguru; Apollona, 300 m (Rechinger, 1943).

4. **Cyprus.** Herbarium specimens: Ad Prodomo non frequens; arborea in campis Wlachiae pro Larnaca allisque insulae locis, 4. 1862 c. fl., Kotschy 730 (W.); Horafi, Stavros valley, Paphos forest. Understory of thick pine crop. Old Monastery Site, 25. 4. 1934 c. fl., Foggie 322 (E.).

Literature: Ayios Hilarion, in declivi lapidoso aridissimo; Boghazi, in declivibus lapidosis siccissimis in valle rivuli opp. Kyrenia; Athalassa prope opp. Nicosia, in colle sicco (Lindberg, 1946); Kuklia in the Messaria, Holmboe 377; Pharmakas, Holmboe 1132 (Holmboe, 1914); In Prodomo, 29. 6. 1880 c. fr., Sintenis et Rigo 44 (Diapulis, 1933; Pojarkova, 1939); Prope Vano Dikomo, 2. 6. 1880 c. juv. fr., Sintenis et Rigo (Pojarkova, 1939).

5. **Lebanon.** Herbarium specimens: Lisière des jardins, a l'est de Saïda, 14. 3. 1853 c. fl., Blanche 17 (G.W.); Beyrouth, in dumosis, 18. 7. 1879 c. fr., Peyron (G.); a Raz-Beyrouth, 28. 3. 1852, Blanche (W.); Liban, 1833, Aucher (W.); Mt. Liban, c. fr., Labillardière (G.).

**Literature:** Beyrouth, 26.4.1880, Barbey 375 (Diapulis, 1933; Pojarkova, 1939); Beyrouth et environs immédiats, Post, Vincet, Napoleon, Mouterde; Ouadi-el-Harir, Pabot; Mchaitiyé à Ainata, Moutedre; Jourd Hasroun, Blanche; Bcharré, Pabot; Souq-el-Gharb à Choueifat, Mouterde; Jamhour, Bsouss, Pabot; Aley à Bsouss, Mouterde; Hadeth, Mouterde; Tripoli, Blanche (Mouterde, 1970); Bchétié — Ain Aata, in machiis, Wall (Rechinger, 1963); ad Gebel Baruck, Boissier (Boissier, 1872); Nordl. Libanon, östl. alpine und subalpine Abhänge unterhalb Aineta häufig, Bormüller 11781; Südl. Libanon, Zedernberg bei Ain Zahalta verbreitet, Bornmüller 11780 (Bornmüller, 1914a); Am See von Jamune, 1880, Schweinfurth 682 (Diapulis, 1933; Pojarkova, 1939); Beirut, near Bhamdun, Post (Post, Dinsmore, 1932); Beirut, 18.5.1824 c. juv. fr., Ehrenberg (Pojarkova, 1939).

**6. Syria.** Herbarium specimens: Antilibanon, inter Damascus et Zahlé, 22.8.1937, Rechinger 2164 (W.); 38 km a Damascus occidentem versus, 24-25.5.1957 c. fl., Rechinger 13200 (W.); In hortis siccioribus pr. Aleppum, 9.5.1841, c. fl., Kotschy 195 (G.W.); 74 km S-W of Damascus. Basaltic stones and rocks, 950 m, 3.5.1933, Eig, Zohary 282 (HUJ.); About 25 km south-west of Alep. Hills. 27.6.1932 c. fr., Eig, Zohary 283 (HUJ.); Damascus: Maaraba, 900 m, 24.5.1932, Wall (S.); Antilibanon, Aithy, 1858, Unger 776 (W.); Prope ruinas Gharra in medio pedis septentrionalis murorum Dschabel Abd el Asis, in declivibus, ca. 500 m, solo calcareo-argilloso, 21.6.1910 c. fr., Handel-Mazzetti 1740 (W.WU); Djebel Drouze. Env. of Souweida, *Quercetum cocciferae*, 1250 m; Basalt soil., 20.6.1932 c. fr., Eig, Zohary 285 (HUJ.); In collibus montosis Abu Gofeh, 3000', 24.4.1855 c. fl., Kotschy 854 (W.).

**Literature:** Djebel Abd el Aziz 1800 m, 1913, Oppenheimer 545, 546 (Diapulis, 1933; Pojarkova, 1939); Djebel Abdul-Aziz, felsiges Mittelgebirge, 800 m, Kohl 227, 228 (Bornmüller, 1911); Jab. 'Abd-el-Aziz, Pabot; Ouadi-el-Qarn, Pabot; Zemrani, Tala' at Moussa, Pabot; Vers Sahl-es-Sahra; Boisement du Djebel Drouze, en grande quantité, Qanaouat, Kafer (Mouterde, 1970); Mons drus. in dit. Kafer, in querceto, 1200 m, Wall (Rechinger, 1959); Bei Nebi-Samwil, 1881 c. fr., Gathe; Bei Wadi Zerka, 1869, c. fl., Christ (Diapulis, 1933; Pojarkova, 1939); Baniyas, Post; Ghutah; Jab. Kulyab (Post, Dinsmore, 1932); Hermon: El Quela', 6.7.1911 c. fr., Aaronshon 3688 (Oppenheimer, Evenari, 1940).

**7. Israel.** Herbarium specimens: Jerusalem, Aelbeny (or Oelbeny) c. fl., Makowsky (W.); Herbarium de Jerusalem, au isert de Jean-B., 4.1889 c. fl., Fr. Jouannet-Maire 469 (W.). Haifa: ad montem Carmel, 9.4.1906 c. fl., H. Petzy (W.); Mt. Carmel, 200 m, fields, 28.3.1911 c. fl., Meyers, Dinsmore 4673 (G.).

**Literature:** Jerusalem, Haran-esch-Scherif, 1871, Kersten (Diapulis, 1933); Jerusalem, Dinsmore (Post, Dinsmore, 1932); Entre Jathun et Tarshiha, 28.8.1911 c. fr., Aaronshon 3689; Saron: Mazar (près Atlith) 19.10.1906 c. fr., Aaronshon 3692 (Oppenheimer, Evenari, 1940).

**8. Jordan.** Herbarium specimens: Judean Mountains, Kefer Ezizon, in a remnant of *Quercetum calliprini*, 6.3.1935 c. fl., Zohary, Girzi 329 (G.); Monte des Oliviers, 4-5.1846. Boissier (G.); Between Es-Salt and Rumman, 600 m, 1.5.1911 c. fl., Meyers, Dinsmore, 673 (G.); Arabia Petraea: ad pagum Sobak, c. 1200 m, 17.6.1909 c. fr., Nábělek 1886, (BAV.); Palaestina orientalis (Ammon): ad pagum Ammân (Rabbath Ammon) ca. 800 m, 16.4.1909, c. fl., Nábělek 1891 (BAV.); Aglun (Gilead) ad pagum Ğeraš (Gerasa), in lapidosis alt ca. 550 m, 18.4.1909, Nábělek 1888, 1888a (BAV.).

**Literature:** Jarash to 'Ajlun, (Post, Dinsmore, 1932); Moab: Foret près de Wadi Sir, 17.4.1908, no 3686; élément de maquis dans la région du Nahr ez-Zerkâ. (Oppenheimer, 1931); Transjordan: es Salt-Suweile, 900 m, Wall (Rechinger, 1951); Hills near Jericho, Barbey (Post, Dinsmore, 1932); Amman district; Zerqa basin, near Jabba village, *Quercus aegilops* forest, ca. 625 m, 14.5.1955, Kasapliligil 2720; Ibrid district: between El-Hamma and El-Mucheibi, ca. 30 m, Yarmouk valley

transition zone, 29. 11. 1955, Kasapligil 1642; Hebron district: Wadi el Kuf, Jebel Gibra, ca. 625 m, In Pine and Cypress plantation, 4. 4. 1955, Kasapligil 2418 (Kasapligil, 1956a). The *Quercus infectoria* forests in Soos, 5 km east of Stefeina Forest Station, 900 m, Ajlun Mountain (Kasapligil, 1956b); Hebron, 4. 5. 1926 c. fl., Markovicz; Bez-Zakharia 4. 5. 1926 c. fl., Markovicz (Pojarkova, 1939); Samaria: Zircon Jacob, 21. 4. 1906, c. fl., Aaronshon 3680 (Oppenheimer, Evenari, 1940).

9. **Iraq.** Herbarium specimens: Distr. Mosul. Ad confines Turciae prov. Hak-kari, in ditone oppidi Zakhō, in quercetis jugi a Zakhō 8 km merid. versus, 2 - 4. 7. 1957 c. fr., Rechinger 12152 (W.); Betw. Spindar and Barash (near Suwara Tuka) S of Amadia, 1230 m, *Quercetum persicae*, 25. 9. 1933 c. fr., Zohary, Amdursky 286 (HUJ.); Sarsang-Zawita, 1000 m, hillside, 21. 6. 1968 c. fr., Anders 2386 (W.); Atrush, rocky red soil, 950 m, 13. 7. 1933 c. fr., Guest 284 (HUJ.); Shaikl Adi, on the hillside 2500', 14. 7. 1933 c. fr., Guest 3665 (HUJ.); Ser Amadia — on open hillside at the Gulli Mazurka, 5000', 3. 8. 1933 c. fr., Guest 4993 (S.); Kurdistania, in Montis Kuh-Sefin, reg. infer, supra pagum Schaklava (ditionis Erbil), 9 - 1000 m, 15. 5. 1893 c. juv. fr., Bornmüller 1026 (G. WU.); Distr. Rowanduz, inter vicos Sheikhan et Sakri Sakran, 5. 6. 1961 c. juv. fr., Hadač, Kader 5424 (PR.); Distr. Rowanduz: ad vicum Sakri Sakran, ad riv., alt. 1900 m, 6. 6. 1961 c. juv. fr., Hadač, Kader 5608 (PR.); Jebel Baradost near Diana Rowanduz, 28 - 29. 7. 1934, Field, Lazar 945 (S.); Erbil Liwa, Salahuddin, among oaks on mountains. 1000 m, 16. 5. 1952 c. fl., Regel 18 (G.W.); Abu Gharib. Heavy clay of oak forest at top of mountain near Salahuddin, Erbil Liwa, 8. 5. 1963 c. fl., Barkley 5681 (W.); Distr. Erbil, 3 km. W Salahuddin, in colli-bus calc., 700 - 1000 m, 22. 4. 1957 c. fl., Erdtman, Goedemans in Rech. 15540 (W.); Sulaimani distr. betw. Surdash and Shadala ca. 1000 m, *Quercetum persicae*, 19. 9. 1933 c. fr., Zohary, Feibrun 281 (HUJ.); Distr. Sulaimaniya. Inter Sulaimaniya et Dokan. In saxosis calc. angustiarum Darband-i Bazian prope Chamchamal, 14. 6. 1957, Rechinger 10580 (W.); Distr. Sulaimania: summo monte Kopi Qaradagh, 29. 5. 1961 c. fl., Hadač et cons. 5782 (PR.); 12 miles SW. Soulaimeyah N. exposure 3800', 22. 5. 1961 c. fl., Stutz 1395 (W.); Distr. Sulaimania loco Benawar Suta dicto prope opp. Penjwin, 26. 5. 1961 c. fl., Hadač, 4938 (PR.); In declivibus supra opp. Penjwin 26 - 27. 5. 1961 c. fl., Hadač et cons. 4861, 4907 (PR.); Distr. Sulaimaniya. Montes Avroman, ad confines Persiae in ditone pagi Tawilla, 1400 m. 15 - 18. 6. 1957 c. juv. fr., Rechinger 10230 (W.); Pl. Mesopot. Kurdistan and Mossul, 1841 c. fl., Kotschy 192 (S.); In latere orientali montes Karadscha Dagh, 10. 6. 1841 c. fl., Kotschy 164 (W.).

Literature: Zawita, Guest 4910 (Meikle, 1966); Zawita, 870 - 1230, no. 4648, 4741, 4857, 4893; Atrush, 885 m, in open pine forest no. 4406; Chia-i-Mandali (Walash to Walza) 1500 - 1800 m, 18. 7. 1932 no. 2659 (Blakelock, 1948); Riwandus, am Händarin, 1300 m, 28. 7. 1893, Bornmüller 1027 (Bornmüller, 1938; Meikle, 1966); Jabal Bakhair, Rawi 23064; Rust, Guest, Alizzi 15852; Avroman, Rawi 22101; Qaradagh, Gillett 7944; Sulaimaniya, Field, Lazar 976; Penjwin, Rawi 22718; Sarchinar (possibly cult?), Gillett 7685; Sinjar, Gillett 11104 (Meikle, 1966).

10. **Iran.** Herbarium specimens: Kurdistania Persica: montes supra pagum Re-żab dit. Kasr-i-Sirin, alt. ca. 1100 m. 5. 5. 1910, Nábélek 1810 (BAV.); Bavanpour, 6. 6. 1950 c. fr., Sabeti 408, 409 (W.); Shuturunku, 2 - 5. 7. 1890 c. fr., Strauss (W.); Sefid Kuh (Lorestan), 14. 6. 1950, Sabeti 384 (W.); Dorud-Azna, 1700 m, 5 - 7. 1959 c. fr., Pabot 12973E (W.); Bisheh, 50 km a Khorramabad, orientem versus, substr. calc., 1200 - 1400 m, 14 - 16. 7. 1948, K.H. et F. Rechinger 5692 (W.); Sepid-Dacht, 13. 6. 1956 c. fr., Sabeti 382 (W.); Heyran (Bakkthiari), 13. 8. 1950 c. fr., Sabeti 383 (W.); Esfahan: Bakhtiari, Heyran 13. 8. 1950 c. fr., Hakimi 5708E (W.); Distr. Kermanshah, 30 km S of Kermanshah, SW of Mahi-Dasht Valley, scrub oak woodland, 12. 5. 1960 c. fl., Bent, Wright 512 - 103 (W.); Kordestan: Baneh-Balekeh, 1700 - 1900 m, 7. 8. 1967 c. fr., Iranshahr, Termé 12872E (W.); W. Lorestan, Ilam, 1200 - 1700 m,

depleted forest of *Quercus persica*, on limestone range, 9.6.1963 c.fl., Jacobs 6839 (W.); Chah-Bazan, 1000 - 1200 m, 26.4.1937 c.fl., Kœie 1546c (W.); Bakhtiari, Pashmshurun, 29.4.1940 c.fl., Koelz 15112 (W.); Zagros Mts., env. of Dasht-Arjan, remnant of destroyed steppe forest, ca. 6800', M. et D. Zohary 1064 (HUJ.); Pere Zend, Aucher-Eloy 4484 (G.W.); In media altitudine alpis Kuh-Delu, 18.6.1842, Kotschy 550 (G.); Kuh Tscha Siach bei Suvend, 17.7.1885 c.fr., Stapf 427 (W.); Fars, Tolé Khosrow — Sissakht Tangué Serrig, 29.7.1949 c.fr., Behboudi 1288E (W.); Ca. 70 km E of Kazerun, shrubby remnants of forest, marly-clay hills, 6000', 29.8.1960, M. et D. Zohary 759 (HUJ.); Fars, 40 km E Kazerun, 1950 m, 10.5.1959 c.fl., Pabot 12972E (W.); 39 km E Kazerun, 1860 m. 10.5.1959, Pabot 12968E (W.); Kuh-Daesch bei Kazerun, 7.5.1885 c.fl., Stapf 426 (W.).

Literature: Kerind, in m. Kuh-i-Gawarreh, 20.5.1909, Strauss (Bornmüller, 1914b; Riedl, 1969); Sultanabad, in fauce Girdu, 6.1890, Strauss (Bornmüller, 1905); Kermanschah, in ditonis fluvii Saimerre valle Dschamnasu 13.5.1904, Strauss; in valle Dscham-Tueh, 14.5.1904, Strauss; in monte Kuh-i-Baludsch, 30.5.1903; Strauss (Bornmüller, 1911); Montes Bakhtiari, inter Sebze-Kuh et Kellar-kuh, 5.9.1902 c.fr., Alexeenko 835 (Pojarikova, 1939); Inter Murghab et Persepolis, 1850 m, Bornmüller 3519 (Riedl, 1969).

Institute of Dendrology and Körnik Arboretum  
Körnik nr. Poznań

#### LITERATURE

1. Birand H. — 1952. *Plantae Turcicae*. A preliminary list of species collected in Turkey, Ankara.
2. Blakelock R. A. — 1948. The Rustam Herbarium, Iraq I, Kew Bulletin 3: 375 - 444.
3. Boissier E. — 1872. *Flora Orientalis*, 2. Basileae, Genevae, Lugundi.
4. Bornmüller J. — 1905. *Plantae Straussianae*, Beih. z. Bot. Ctrlbl. 19, 2: 195 - 270.
5. Bornmüller J. — 1911. *Collectiones Straussianae novae*, Beih. z. Bot. Ctrlbl. 28, 2: 225 - 267.
6. Bornmüller J. — 1914a. Zur Flora des Libanon and Antilibanon, Beih. z. Bot. Ctrlbl. 31, 2: 177 - 280.
7. Bornmüller J. — 1914b. *Reliquiae Straussianae*, Beih. z. Bot. Ctrlbl. 32, 2: 349 - 419.
8. Bornmüller J. — 1938. *Iter Persico-turcicum 1892 - 1893*, Beih. z. Bot. Ctrlbl. 58 B: 252 - 302.
9. Bornmüller J. — 1940. *Symbolae ad Floram Anaticam*, 4 - 5 Lief., Feddes Repert. (Beihft.) 89, 1: 165 - 260.
10. Bornmüller J. — 1941. Bemerkenswerte floristische Funde im Ala Dag II, Feddes Repert. 50: 133 - 150.
11. Browicz K. — 1972a. *Crataegus* L. in P. H. Davis, *Flora of Turkey* 4: 133 - 147, Edinburgh.
12. Browicz K. — 1972b. Materials for a flora of Turkey XXVI. New taxa of woody *Rosaceae*, Notes from the Royal Bot. Gard. Edinburgh 31, 2: 321 - 324.
13. Czegezott H. — 1939. A contribution to the knowledge of the flora and vegetation of Turkey, Feddes Repert. (Beihft.) 107.
14. Diapulis Ch. — 1933. II Beiträge zur Kenntnis der orientalischen Pomaceen (*Pirus*, *Sorbus*, *Crataegus*), Feddes Repert. 34: 29 - 72.

15. Franco J. do A. — 1968. *Crataegus* L., in *Flora Europaea* 2: 73 - 77, Cambridge.
16. Handel-Mazzetti H. F. — 1913. *Pteridophyta* und *Anthophyta* aus Mesopotamien und Kurdistan sowie Syrien und Prinkipo, *Ann. k.k. naturh. Hofmus. Wien* 27: 41 - 92.
17. Holmboe J. — 1914. *Studies on vegetation of Cyprus*, Bergens Museum Skrifter, Ny Raekke., Bind 1 No. 2, Bergen.
18. Kasapligil B. — 1956a. *Plants of Jordan with notes on their ecology and economic uses*, Forestry Department, Amman.
19. Kasapligil B. — 1956b. *An ecological survey of the vegetation in relation to forestry and grazing*, Raport of the Government of the Hashemite Kingdom of the Jordan, Roma.
20. Krause K. — 1934. *Ankaranin Floru*, Ankara.
21. Lindberg H. — 1946. *Iter Cyprium*, Åca Soc. Scient. Fennicae, Nov. Ser. B., 2, 7, Helsingfors.
22. Meikle R. R. — 1966, *Crataegus* L., in C. C. Townsend and E. Guest, *Flora of Iraq*, 1: 115 - 118, Baghdad.
23. Mouterde P. — 1947. *La végétation arborescente des pays du Levant*, Publications techniques et scientifiques de l'école Française d'Ingenieurs de Beyrouth No 13, Beyrouth.
24. Mouterde P. — 1970. *Nouvelle Flore du Liban et de la Syrie*, 2, Beyrouth.
25. Oppenheimer H. R. — 1931. *Reliquiae Aaronshonianaee I. Florula Transjordanica*, *Bull. d. l. Soc. Bot. d. Genève*, 22.
26. Oppenheimer H. R., Evenari M. — 1940. *Reliquiae Aaronshonianaee II. Florula Cisiordanica*, *Bull. d. l. Soc. Bot. d. Genève*, 31.
27. Pojarkova A. I. — 1939. *Contribution to the knowledge of the hawthorns of the Old World. Crataegus Azarolus* L. and the hawthorns of the Section *Azaroli* Loud. with yellow fruit and two stones, *Jour. Bot. USSR* 24, 5: 437 - 454.
28. Poletiko O. M. — 1954. *Crataegus* L. in *Derevia i Kustarniki SSSR*, 3: 514 - 577. Moskva—Leningrad.
29. Post G. E., Dinsmore J. E. — 1932. *Flora of Syria, Palestine and Sinai*, 1, Beirut.
30. Rechinger K. H. — 1943. *Flora Aegaea*, Wien.
31. Rechinger K. H. — 1951. *Zur Flora von Palaestina und Transjordanien*, *Reliquiae Samuelssonianaee V.*, *Arkiv f. Botanik*, ser. 2, Nr. 5: 271 - 455.
32. Rechinger K. H. — 1959. *Zur Flora von Syrien, Libanon und angrenzenden türkischen Gebieten*, *Arkiv f. Botanik*, ser. 2, Nr. 5, 1: 1 - 488.
33. Riedl H. — 1969. *Crataegus* L. in K. H. Rechinger *Flora Iranica* 66: 49 - 65, Graz.
34. Tchihatcheff P. — 1860. *Asie Mineure* 3, *Botanique*, Paris.

KAZIMIERZ BROWICZ

*Crataegus aronia* (L.) Bosc ex DC.

## Streszczenie

Autor omawia szczegółowo zasięg *Crataegus aronia*, jednego z bardziej charakterystycznych głogów w południowo-zachodniej Azji. O ile jego odróżnianie od innych, blisko spokrewnionych gatunków z tego terenu nie sprawia zasadniczo większych trudności, to sprawa jego właściwej nazwy jest wciąż kontrowersyjna.

Zarówno w zbiorach zielnikowych, jak i w literaturze florystycznej w równym niemal stopniu stosuje się dla niego jeszcze inną nazwę, a mianowicie *C. azarolus* L. Jedni autorzy uważają, że są to dwa, samodzielne gatunki, podczas gdy inni traktują je jako synonimy i najczęściej nazwę *C. azarolus* jako starszą stawiają na pierwszym miejscu. Sprawę tę wyjaśniła dokładnie Pojarkova (1939), według której *C. azarolus* L. występuje tylko w południowej Francji oraz we Włoszech i charakteryzuje się owocami o barwie ceglastej lub czerwonej przeważnie z dwoma pestkami, podczas gdy *C. aronia* rośnie w południowo-zachodniej Azji i ma owoce żółte z 2-3 pestkami. Żółto- i wielkoowocowe głogi wydzieliła Pojarkova w oddzielną serię *Ponticae*, do której obok *C. aronia* należą jeszcze: *C. linnaeana* Pojark. z Sycylii i południowych oraz środkowych Włoch, *C. triloba* Poir. z gór północno-zachodniej Afryki i *C. pontica* C. Koch z Zakaukazia, północnego Iranu oraz środkowej Azji, a także z kilku stanowisk w Turcji.

Zasięg *C. aronia* opracował autor na podstawie bogatych zbiorów zielnikowych, jak również danych z literatury, przyjmując (lecz z dużą dozą ostrożności), że informacje o *C. azarolus* L. z południowo-zachodniej Azji dotyczą w istocie rzeczy *C. aronia*. Głóg ten rośnie na Krecie, na wyspie Rodos i na Cyprze, w południowej i częściowo środkowej Turcji, w zachodniej Syrii, w Libanie, w Izraelu, w zachodniej Jordanii, w północnym Iraku oraz w południowo-zachodnim Iranie. Występuje przede wszystkim na wapiennym, skalistym podłożu, w widnych lasach i w zaroślach dębowych, rzadziej w lasach sosnowych, najczęściej w średnich położeniach górskich, między 600 - 1600 m n.p.m. Jego najniższe stanowiska położone są nawet poniżej 100 m n.p.m., a najwyższe (w górach Zagros w Iranie) sięgają po 2200 m. *C. aronia* jest bardzo wytrzymała na suszę, to też niejednokrotnie wkracza w rejony o charakterze pustynnym. Tu i ówdzie spotyka się go przy drogach lub też wśród pól uprawnych, gdzie być może został posadzony (jadalne owoce). W celach konsumpcyjnych jeszcze do dziś uprawiany jest w Iraku, w Libanie i w Syrii.

КАЗИМЕЖ БРОВИЧ

### *Crataegus aronia* (L.) Bosc ex DC.

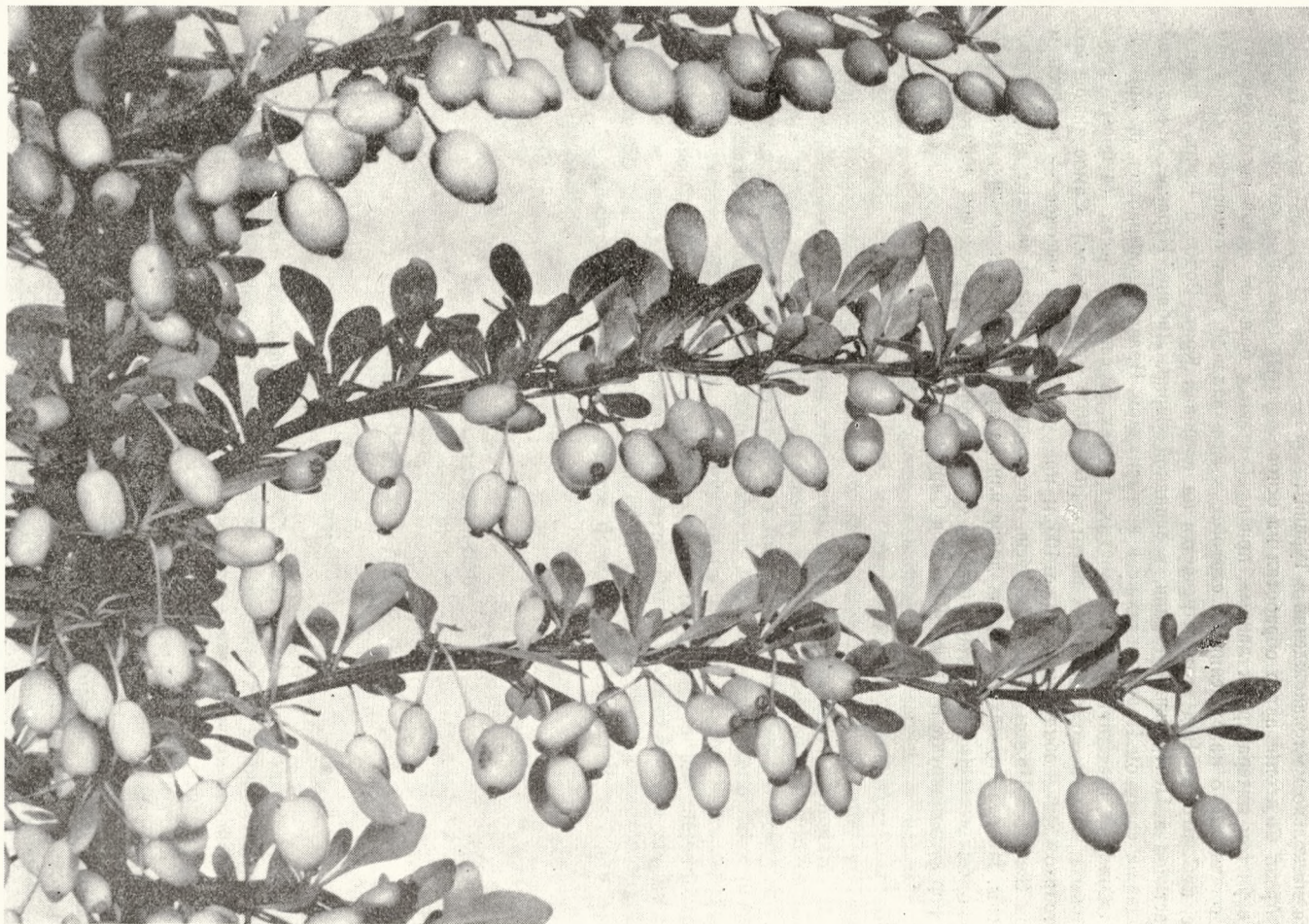
#### Резюме

Автор детально рассматривает ареал *Crataegus aronia* — одного из наиболее характерных боярышников юго-западной Азии. Выделение его из числа других близкородственных видов этого района не представляет значительных трудностей. В то же время вопрос об его правильном наименовании довольно противоречив. Как в гербарных коллекциях, так и во флористической литературе почти столь же часто к нему применяется другое название, а именно *C. azarolus* L. Одни авторы принимают их за два отдельных вида, другие считают эти названия синонимами и чаще всего ставят название *C. azarolus* на первое место как приоритетное. обстоятельно разобралась в этом вопросе Пояркова (1939), установившая, что *C. azarolus* L. встречается только в Южной Франции и в Италии и характеризуется плодами кирпичного или красного цвета, преимущественно с двумя косточками. Второй вид — *C. aronia* произрастает в юго-западной Азии и имеет жёлтые плоды с двумя-тремя косточками. Боярышники с крупными жёлтыми плодами Пояркова выделила в особую серию *Ponticae*, к которой принадлежат, кроме *C. aronia*, также *C. linnaeana* Pojark. (Сицилия, южная и центральная Италия), *C. triloba* Poir. (горы се-



веро-западной Африки), *C. pontica* С. Koch (Закавказье, северный Иран, Средняя Азия, несколько местонахождений в Турции).

Ареал *C. aronia* автор обработал на основе богатых гербарных коллекций, а также с учётом литературных данных, приняв (однако с большой дозой осторожности), что сообщения о нахождении *C. azarolus* в юго-западной Азии относятся, на самом деле, к *C. aronia*. Вид этот встречается на островах Крит, Родос и Кипр, в южной и частично в Центральной Турции, в западной Сирии, Либане, Израиле, в западной Иордании, северном Ираке, а также в юго-западном Иране. Произрастает он преимущественно на известняковых каменистых грунтах, в светлых лесах (дубовых, реже сосновых), чаще всего на средних высотах (600 - 1600 м над ур. м.). Самое низкое его местонахождение обнаружено ниже 100 м над ур. м., самое высокое — на 2000 м (горы Загрос в Иране). *C. aronia* очень засухоустойчив и часто заходит в пустынные районы. Иногда его находят вдоль дорог или на культивируемых землях, где он возможно был высажен человеком (плоды его съедобны). Как плодовое дерево его до сих пор культивируют в Иране, Либане и Сирии.



Fot. K. Jakusz

Berberys Thunberga (*Berberis thunbergii* DC.) — gałązka z owocami

Herbarium Uniwersyteckiego Ogrodu Botanicznego  
Instytut Botaniki Uniwersytetu Warszawskiego  
ul. Żwirki i Wigury 101, 01-918 Warszawa, tel. 22 623 42 10  
www.botanika.uw.edu.pl