

## New Species of *Hypericum* from Turkey

BY

BARBARA A. POULTER

The three new species of *Hypericum* described below were collected by Dr. P. H. Davis on his expedition to Southern Anatolia in 1949. These gatherings have been compared with material in the herbaria at Kew, the British Museum (Natural History) and Edinburgh. I hope to publish at a later date a revision of this genus in Turkey.

I am indebted to Prof. Sir William Wright Smith and Dr. Davis for their help in preparing these descriptions.

***Hypericum ternatum* Poulter, sp. nov.** (Sect. *Euhypericum* Boiss., subsect. *Triadenoidea* Jaub. et Sp.). Verosimiliter affinis *H. pallenti* \* Banks et Sol., sed habitu manifeste fruticoso, ramulis foliosis abbreviatis, insuper foliis ternatim verticillatis facile distinguenda.

*Suffrutex* saxatilis, 8-15 cm. altus (in umbra ad 30 cm.), erectus, irregulariter hemisphaericus. *Radix* in parte superiore crassa, tortuosa, nigricans, ad 1 cm. lata. *Rami vetusti* 1-5 mm. diametro, pallide subfusci, lamellis exterioribus ut in radice decorticantibus; ramuli foliosi 1.5-8 cm. longi, glabri, glauci, trilineati, internodiis 1-7 mm. longis (in umbra ad 11 mm.). *Folia* verticillata, terna, 2-10 mm. longa, plana, glabra, glauca, elliptica vel obovata, in petiolum brevem attenuata, crebre vel sparsim pellucido-punctata, haud nigro-punctata. *Flores* terminales, solitarii vel raro 2-3 in axillis foliorum supremorum. *Pedicelli* 3-11 mm. longi. *Bracteolae* 1-2.5 mm. longae, anguste lineares, submembranaceae. *Sepala* 3-5 mm. longa, 0.75-2 mm. lata, lanceolata, acuta, virescentia vel roseo-tincta, sparsim pellucido-punctata non nigro-punctata nisi ad apicem vel marginem punctis nigris 1-2 munita, marginibus integris vel irregulariter sparsim glanduloso-denticulatis. *Petala* 9 mm. longa, 4 mm. lata, oblongo-elliptica, obtusa, integra, ad apicem indistincte pellucido-punctata. *Stamina* triadelpa circa 50. *Gynoecium* 5-6 mm. longum, stylis ovarium aequantibus. *Ovarium* tricarpetatum, triloculare; placentae axillares, ovulis paucis. *Capsula* 5-6 mm. longa, indistincte longitudinaliter vittata, vesiculis haud praedita; stamina et petala circum fructum persistentia. *Semina* nigra, 1.75 mm. longa, 0.75 mm. lata, cylindrica, parum curvata, foveolato-lineata, carinata.

\* *H. pallens* Banks et Sol., in Russell, Nat. Hist. Aleppo, ed. 2, ii, 270 (1794); A. Eig in Journ. of Bot., lxxv, 188 (1937).

Syn.: *H. cuneatum* Poir. in Lam. Encyc. Méth. Suppl., iii, 699 (1813). I have examined the type of *H. pallens* at the British Museum, and it is certainly identical with specimens of *H. cuneatum*. Stefanoff (in Jahrb. Land. u. Forstw. Fak. Univ. Sofia, xi, 91: 1933) lists *H. pallens* Solander under "Species ignotae et dubiae," and so presumably had not examined the material at the British Museum.

TURKEY. Pisidia: Prov. Antalya, distr. Gebiz; Bozburun dağ nr. Tozlu Çukur yayla, on conglomerate cliffs at 1900 m., 24 July 1949, Davis & Bilger, D. 15580 (*holo. K, iso. E*); Bozburun dağ between Boğaz Azzi and Tozlu Çukur yayla, on conglomerate cliffs at 1600 m., 24 July 1949, Davis & Bilger, D. 15514; Prov. Isparta, distr. Sütçüler; W. side of Sarp dağ, on limestone rocks at 1700 m., 29 July 1949, Davis & Bilger, D. 15781.

A very distinct species, but one whose sectional affinities are rather uncertain. The whorled leaves would immediately suggest Sect. *Eubypericum* subsect. *Coridia* Spach, but *H. ternatum* is so very different from *H. empetrifolium* Willd. and *H. amblyocalyx* Coust. & Gand. that it would be unnatural to include it in that section. To name some of the more obvious differences, the leaves of *H. ternatum* are flat and obovate (not linear and revolute), the growth habit is very different, the sepals and petals are persistent in fruit, and the seeds are pitted in linear rows (not papillose).

On floral characters, *H. ternatum* is very like *H. pallens* Banks & Sol., and in my opinion could be included in subsect. *Triadenoidea* Jaub. & Sp. as enlarged by Boisser (Fl. Or. i, 786: 1867), despite its whorled leaves. Jaubert and Spach (Ill. Pl. Or. i, 34, t. 16: 1842), in their account of *H. origanifolium* Willd., describe the leaves as being opposite, rarely whorled, so that it seems possible for a species with whorled leaves to be most closely related to one in which the leaves are opposite.

Stefanoff (in Jahrb. Land. u. Forst. Fak. Univ. Sofia, xi: 1933) has raised subsect. *Triadenoidea* to the rank of section and segregated from it a number of smaller sections, *H. pallens* forming the monotypic section *Cuneatum* Stef. On this basis *H. ternatum* would also form a monotypic section, but for the present I prefer to leave it within the wider limits of subsect. *Triadenoidea*.

In general habit and leaf shape, *H. ternatum* is somewhat similar to *H. Russegeri* (Fenzl) Keller (*Triadenia Russegeri* Fenzl). The leaves of *H. Russegeri* are opposite, however, and the flowers are quite distinct, having appendages at the base of the petals and hypogynous glands alternating with the stamen bundles.

*H. ternatum* is in cultivation at the Royal Botanic Garden, Edinburgh.

***Hypericum minutum* Davis et Poulter, spec. nov.** (Sect. *Eubypericum* Boiss., subsect. *Triadenoidea* Jaub. et Sp.). Affinis *H. pumilioni* Bornm., sed statura minore, foliis latioribus subsessilibus margine manifeste nigro-punctatis, sepalis vix glanduloso-denticulatis minus obtusis hic illic nigro-punctatis differt.

*Planta* perennis, pumila, glaberrima, saxatilis, basi indurata e ramulis lignosis squamigeris composita. *Caules* fragiles, appressi, 1-2 (-3) cm. longi, teretes, tenuissimi, glaberrimi, glauci, internodiis 2-3 (-8) mm. longis, floribus 1-3 terminati. *Folia* opposita, congesta (jugis 4-8), late elliptico-ovata vel suborbicularia, firma, glaberrima, subsessilia, basi truncata, apice obtusa, sparsim pellucido-punctata, margine circumcirca punctis nigris praedita. *Flores* solitarii, vel in corymbum 2-3-florum dispositi. *Pedicelli* 2-3 mm. longi. *Bracteolae* 1-2 mm. longae, anguste lineares, margine nigro-punctatae. *Sepala* oblonga, subobtusa vel subacuta, 2-2.5 mm. longa, vix 1 mm. lata, superficie nigro-punctata et pellucido-punctata, ad marginem breviter glanduloso-denticulata. *Petala* anguste elliptica, 7-8 mm. longa,

2 mm. lata, integra, pellucido-punctata, apice sparsim nigro-punctata. *Stamina* triadelpa, circa 15. *Ovarium* tricarpellatum, triloculare, tandem irregulariter et longitudinaliter glanduloso-vittatum. Fructus maturus ignotus.

TURKEY. Caria: Prov. Denizli: Boz dağ (nr. Acipayam), above Geyran yaylâ at 1800–2200 m., in crevices of limestone rocks with *Globularia dumulosa*, rare, 16 July 1949, Davis & Bilger, D. 13356 (*holo.* K).

This species seems to be closely related to *H. pumilio* Bornm., and also resembles in a general way *H. monadenum* Robson,\* and *H. fragile* Heldr. & Sart. These four species appear to form a very natural group, and I would disagree with Stefanoff in separating *H. monadenum* into a separate monotypic section. The only characters used are those of the seeds, which are dark coloured, cylindrical, and slightly rugose in *H. monadenum*, and pale coloured, curved, and very elongated, with an almost smooth surface, in *H. fragile* and *H. pumilio*. In view of the morphological similarity between these species, such characters are probably only of specific, rather than sectional, importance.

Unfortunately the seeds of *H. minutum* are not known, but whether they resemble those of *H. fragile* and *H. pumilio*, or those of *H. monadenum*, or are distinct from both, I feel that the seed characters can only be of secondary importance in classifying a group which otherwise shows such obvious morphological similarity.

***Hypericum imbricatum* Poulter, spec. nov.** (Sect. *Euhypericum* Boiss. subsect. *Millepora* Spach). Affinis *H. leproso* Boiss. var. *leproso*, sed foliis glabris crassis imbricatis, inflorescentia pauciflora, sepalis oblongis obtusis differt; necnon affinis *H. aviculariifolio* Jaub. et Sp. sed foliis minoribus crassis imbricatis, sepalis oblongis obtusis differt.

*Planta* perennis, 3–10 cm. alta, ad basin indurata ramosa. *Radix* crassa, lignea, saepe ad 3 mm. lata. *Caules* simplices, herbacei, erecti vel procumbentes, teretes, glabri, glauci, non nigro-punctati, internodiis 0.5–5 (–9) mm. longis. *Folia* opposita, in turionibus sterilibus et ad basin turionum fertilium dense imbricata, sed superne in turionibus fertilibus multo conspersa, late elliptica vel ovata, 1.5–5 mm. longa, sessilia, crassa, subcoriacea, glabra, rugosa, glauca, pellucido-punctata, ad marginem vel ubique nigro-punctata. *Flores* solitarii, vel 3–5. *Pedicelli* 1.5–5 mm. longi. *Bracteolae* 3–4 mm. longae, concaviusculae. *Sepala* 2.5–4 mm. longa, 1.25–2 mm. lata, oblonga, obtusa, vix ad basin partita, nigro-punctata, marginibus brevissime glanduloso-fimbriatis ut in bracteolis. *Petala* 7 mm. longa, 3 mm. lata, obovata, integra, nigro-punctata indistincte pellucido-punctata. *Stamina* triadelpa, circa 30. *Ovarium* tricarpellatum, triloculare. *Capsula* fere matura vesiculis elongatis saepe obliquis ornata. *Semina* circa 0.8 mm. longa, 0.3 mm. lata, cylindrica, foveolato-lineata, paullo curvata et carinata.

\* *H. monadenum* Robson, nom. nov.

Syn.: *H. ovalifolium* Stefanoff in Kew Bull. 1931, 30—non *H. ovalifolium* Koidzumi in Bot. Mag. Tokyo, xxxii, 61 (1918).

I am indebted to Mr. N. K. B. Robson (Department of Botany, Edinburgh) for bringing to my notice the fact that the name *H. ovalifolium* Stef. was invalid (Koidzumi's description obviously refers to a different plant), and for permitting me to publish the new name.

The epithet *monadenum* refers to the single large black gland which is found at the apex of the upper leaves of this species.

TURKEY. Prov. Mersin, distr. Anamur: Çamurlu yaylâ between Ermenek and Anamur, on low rocks at 2100 m., 15 August 1949, Davis 16266 (*holo.* K, *iso.* E).

This species is of very distinct facies and can be easily differentiated from related species. The leaves at the base of the stem in dwarfed specimens of *H. aviculariifolium* Jaub. & Sp. and in *H. leprosum* Boiss. var. *leprosum* are often crowded together and rather imbricate, but the imbrication is never so regular as in *H. imbricatum* and does not proceed so far up the stem. Moreover, the largest leaves of *H. imbricatum* only equal the smallest leaves of the other species, and are usually thicker.

This species is being cultivated by Mr. W. E. Th. Ingwersen from seed of the type gathering.