

A NEW SPECIES OF ACANTHOPHYLLUM (CARYOPHYLLACEAE)
FROM IRAN

D. Kh. Yukhananov & J. R. Edmondson

Yukhananov, D. Kh. & Edmondson, J. R. 1977 05 31: A new species of *Acanthophyllum* (Caryophyllaceae) from Iran. — *Iran. Journ. Bot.* 1(2): 109–112. Tehran.

Acanthophyllum crassinodum, sp. nova, is described from the Kopet Dagh region of NE. Iran and is contrasted with *A. glandulosum*, its closest relative in sect. *Pleiosperma* Boiss.

D. Kh. Yukhananov, Botany Department, All-Union Research Institute for Medicinal Plants 142790 p/o VILR Moscow, U.S.S.R. — John R. Edmondson, Flora of Turkey Unit, at Royal Botanic Garden, Inverleith Row, Edinburgh EH4 5LR. Great Britain.

گونه جدید *Acanthophyllum crassinodum* (Caryophyllaceae) از شمال شرقی ایران
از یوک هانانو و ادمنسون
گونه جدید فوق از ناحیه کپت داغ در شمال شرقی ایران معرفی میگردد، این گونه
اختلاف نمایانی با *A. glandulosum* دارد. نزدیکترین وابستگی این گونه در بخش
Pleiosperma Boiss. قرار دارد.

In 1973 a collection of herbarium material was made by J. R. Edmondson, then at the University of Leicester, during a botanical expedition to NE. Iran. In Tandureh National Park, a wildlife reserve near Darreh Gaz (Khorasan province) which covers part of the botanically rich Kopet Dagh range of mountains, specimens of *Acanthophyllum* were collected that could not be readily identified. Material was sent to D. Kh. Yukhananov, who concluded from a study of the species of sect. *Pleiosperma* from Iran and neighbouring countries that none was identical with the newly discovered plant; we therefore describe it here as a new species.

The species was discovered in a limited area on the north side of one of the ranges comprising the Kopet Dagh, in a district which has not hitherto been botanized intensively. The zone close to the road from Ashkhabad to Quchan has been explored by a number of botanists, including Czernjakovskaya, Schmid and Reisinger. The latter also made an important collection on the Kuh-e Allah Akbar, which lies to the east of the area which now forms Tandureh National Park, where the road to Darreh Gaz crosses the most northerly major ridge. The rather inaccessible area in between these two roads appears to have remained unexplored, but its designation as a conservation area offers greatly improved opportunities for future botanical studies. Its vegetation consists mainly of dry steppe at lower levels, with *Artemisia* and *Alhagi* as the leading species; thorn-cushion groups (*Astragalus*, *Acantholimon*, *Acanthophyllum*) are frequent at higher altitudes. Scattered bushes and small trees of *Juniperus excelsa* occur mainly above 1800 m.

***Acanthophyllum crassinodum* Yukhananov et Edmondson, sp. nova**
(Sect. *Pleiosperma* Boiss.).

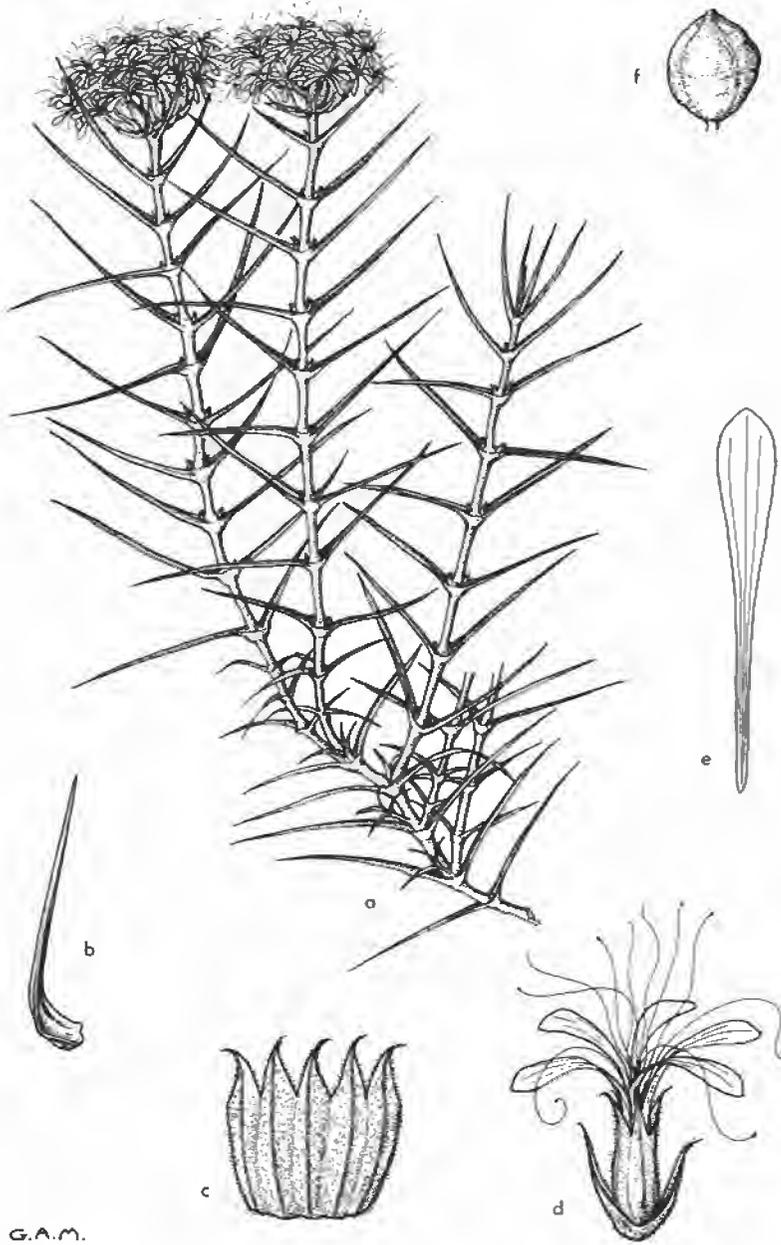
Description. Suffrutex 15–20 cm altus, ad basim paulo ramosus, pilis parvis simplicibus et glandulosis haud dense tectus. Caules crassi,

inter nodos c. 2 mm diametro vel crassior, ad nodos valde incrassati, internodiis (0.8–)1–1.5 cm longis. Folia patentia, superiora oblique sursum directa, aculeiformi-spinescentia, (2.5–)3.5–4.5(–5) cm longa, 1–1.5 mm lata, supra canaliculata, subtus convexa, axillis ramis sterilibus abbreviatis. Inflorescentia terminalis, 1.5–2 cm lata, corymboso-capitata; flores sessiles, congesti. Bractee calyce sesquilingiores, lanceolatae vel anguste oblongae, carinatae, spinescentes, ad marginem anguste paleaceae; bracteolae calycem aequantes vel subbreiores. Calyx campanulato-cylindricus, 8–9 mm longus, ad 1/4 incisus. Petala rosea, spathulata, calyce subduplo longiora. Ovarium 12-ovulatum. Stamina calycem duplo superantia. Floret Jun.—Jul.

Iran, prov. Khorasan: 30 km WSW. Darreh Gaz, in declivibus lapidosis c. 5 km SW. Chehelmehr prope semitam ad Chesmeh-ye Shekerab ducentem, 37° 52' lat. bor., 59° 00' long. orient., alt. 1400 m, 11 vii 1973, leg. J. R. Edmondson 1310 (holotypus LE, isotypus E).

Diagnose. *A. glanduloso* Bunge ex Boiss. proxima est, sed caulibus ad basim paulo ramosis, crassis, nodis valde incrassatis, pilibus simplicibus glandulosisque non dense puberulis, foliis longioribus, minus divergentibus, calyce longiore, petalis calyce subduplo longioribus necnon staminibus calycem duplo superantibus differt.

Suffruticose perennial 15–20 cm tall, little-branched at the base, rather sparsely covered with simple and glandular hairs. Stems robust, distinctly swollen at the nodes; internodes (0.8–)1–1.5 cm long, about 2 mm in diameter. Leaves patent, especially the upper directed obliquely upwards, with a robust thorn at the apex, (2.5–)3.5–4.5(–5) cm long, 1–1.5 mm broad, channelled above, convex beneath, with short sterile axillary shoots. Inflorescence terminal, 1.5–2 cm broad, corymbose-capitate; flowers sessile, densely clustered. Bracts 1 1/2 times as long as the calyx, lanceolate to narrowly oblong, keeled, apex spiny, with narrowly hyaline margins. Bracteoles equalling or slightly shorter than the calyx. Calyx campanulate-cylindrical, 8–9 mm long, divided to 1/4. Petals pink, spathulate, almost twice as long as the calyx. Ovary with 12 ovules. Stamens twice as



Handwritten signature

G.A.M.

Fig. 1. *Acanthophyllum crassinodum*. - A. Habit (x 0.7). - B. Bract (x 4). - C. Calyx (x 3.3). - D. Flower with bracteoles (x 2.7). - E. Petal (x 4.7). - F. Capsule (x 5.3).

long as the calyx. Flowers in June to July.

Iran, prov. Khorasan: 30 km WSW. of Darreh Gaz, on stony slopes about 5 km SW. of Cheshmeh near the track leading to Cheshmeh-ye Shekerab, 37° 52' N., 59° 00' E., alt. 1400 m, 11th June 1973, collected by J. R. Edmondson 1310 (holotype LE, isotype E).

Close to *A. glandulosum*, but stem little-branched at the base, robust, distinctly swollen at the nodes, sparsely glandular- and simple-hairy, leaves longer, up to 4.5(-5) cm (in *A. glandulosum* up to 3 cm), the upper directed obliquely upwards, calyx longer, petals almost twice as long as the calyx, stamens twice as long as the calyx.

The new species can be allocated to sect. *Pleiosperma* not only on account of its close overall resemblance to the other members of the section, but also on the basis of its ovule number. It is easily distinguished from *A. sordidum* Bunge ex Boiss., which has very short

retuse petals.

A comparative study of the stem anatomy of *A. crassinodum* and of *A. glandulosum* revealed differences in the relative thickness of the primary xylem and the central cylinder. In the former, the primary xylem is thicker and becomes less hardened; in the latter, the central cylinder is thicker.

Acknowledgements

Thanks are due to Mr. E. Firouz, Director of the Department of the Environment, Tehran, for granting permission to visit Tandureh National Park and for assistance with transport and accomodation. John Edmondson also wishes to acknowledge financial help towards his expedition from the Bond Fund, Leicester University. We are grateful to Miss G. A. Meadows for preparing the illustrations, and to Dr. H. Czeika and Dr. P. H. Davis for commenting on the manuscript.