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Agriophyllum montasiri, a new species of Chenopodiaceae from Eastern Arabia*

from

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I n t r o d u c t i o n

The genus *Agriophyllum* M. Bieb. ex C. A. Mey. (Chenopodiaceae) comprises 6 species distributed mainly in Central Asia, with *A. latifolium* Fisch. et Mey. extending southwards to Pakistan while *A. arenarium* M. Bieb. (= *A. squarrosus* (L.) Moq.) spreads westwards through Caucasia to Europe (IL'IN 1936, KITAMURA 1960, BALL 1964, STEWART 1972). All 6 species are small annual herbs inhabiting barchan sand dunes and have linear-lanceolate sessile leaves, axillary spicate glomerules and branched stellate hairs on stems, leaves and bracts.

Despite the numerous floristic studies on various parts of eastern Arabia (e.g. BATANOUNY 1981, BLATTER 1919-1936, BOULOS 1978, CHAUDHARY 1983, CHAUDARY and ZAWAWI 1983, DAOUD and AL-RAWI 1985, DE MARCO and DINELLI 1974, MANDAVILLE 1961-1982, MIGAHID 1978), the only available record of *Agriophyllum* in the Arabian Peninsula is that of *A. minus* Fisch. et Mey. from southern Qatar close to the borders with Saudi Arabia (EL AMIN 1983). Nevertheless, a species of *Agriophyllum* has been frequently encountered throughout the Eastern Province of Saudi Arabia and did not fit the diagnosis of any of the 6 species hitherto known. Furthermore, detailed morphological, anatomical and palynological comparison with several authenticated specimens of the species failed to associate the Saudi material with any of them. Therefore, it is described here as a new species.

* Dedicated to the memory of the Late Prof. Dr. H. MERXMÜLLER.

Agriophyllum montasiri El-Gazzar, sp. nov.

Herba annua glabra spinosa, caulis rigidus, sulcatus, a basi ramosus ramis lateralibus nonnullis parvis. Folia alterna, sessilia, simplicia, lineari-lanceolata, 3-5 cm longa, 4-5 mm lata, 5-7 nervia nervis parallelis in faciebus ambabus prominentibus, margine integerrima, apice spinosa, basi aliquantum angustata. Inflorescentia spicata spicis axillaribus; bracteae aggregatae, ovatae, 7-11 mm longae, 3-4 mm latae, spinosae acuminatae. Flores solitarii; tepala 3-5 translucencia inaequalia, apice vel obscure dentata, stamina 2-5 tepalis subbreviora filamentis latis glabris, antheris lutei-aurantiacis; pollen polyporatum globulare; ovarium uniloculare uniovulatum; fructus lenticularis alatus spinis pugentibus armatus.

Typus: El-Gazzar 7197 (in Herbarium of King Faisal University, Hofuf; 9 June 1984). Plate 1.

The plant is a glabrous spiny annual herb; stem rigid, grooved and branching from the base with some small lateral branches. Leaves alternate, sessile, simple, linear-lanceolate, 3-5 cm long, 4-5 mm broad, 5-7 nerved, nerves parallel and prominent on both surfaces, margin entire, apex spiny, base slightly tapering. Inflorescence spicate, spikes axillary; bracts aggregated, ovate, 7-11 mm long and 3-4 mm broad, acuminate, spiny-tipped. The flowers are solitary in bract axils; perianth of 3-5 transparent unequal tepals, apex entire or obscurely dentate; stamens 2-5 slightly shorter than tepals, filaments broad and glabrous, Anthers yellow-orange; pollen polyporate, globular; ovary unilocular with one ovule; style short and terminated by two long exserted stigmas; achene lenticular. winged and with 4 sharp spines. This species was first collected from the type locality 4 km west of Dammam, but was later found on sand dunes throughout the Eastern Province of Saudi Arabia.

DISCUSSION

Agriophyllum montasiri resembles in general aspect *A. arenarium* M. Bieb. ex C. A. Mey., and has the same type of fruit as in *A. minus* Fisch. et Mey. (with two broad lacinate scarious wings on top of the achene, 2 lateral sharp spines on the middle of the style and two slightly curved terminal spines; Plate 1 c). However, *A. montasiri* is easily separable from all other species of *Agriophyllum* by being entirely glabrous; it is lacking in the stellate hairs found on the stems, leaves and bracts of the other 6 species.

The specimens collected by El Amin (1983) from southern Qatar (near Salwa on the borders with Saudi Arabia) have been identified by him as *Agriophyllum minus*, probably on the basis of its characteristic features of the fruit. Since *Agriophyllum montasiri* shares the same fruit features with *A. minus* and El Amin's description of his material includes no mention of stellate hairs on the stem, leaves and bracts, it would seem that the specimens of *A. minus* are best referred to *A. montasiri* particularly in view of the continuity of the geographical range of the material collected from Saudi Arabia and Qatar.

The new species has been named after my teacher Prof. A. J. Montasir as a small token of esteem and appreciation.

Acknowledgement

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Plate 1. *Agriophyllum montasiri*, sp. nov.

A. Habit; B. flower with some tepals and stamens detached to expose the gynoecium; C. fruit.

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