

## New Treatment of *Heliotropium Muricatum* (Boraginaceae) From Iraq



### Education

KEYWORDS : *Heliotropium muricatum*

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### ABSTRACT

*A new endemic species. Heliotropium muricatum Abbas Sp. Nov is described from Iraq.*

During the previous treatment of the genus *Heliotropium* L. in Iraq. Both fresh and herbarium species were examined through the course of study. In the recent treatment found a new species after many visit. A new treatment for this species which had been on 2005 after precise study we discover new characters of this species. The description of this species as follow

**H. muricatum** Abbas sp. Nov. Sect. **Heliotropium** 1. Planta annua, muricatus, habitu integer variabilis 15-19cm. Longa, Caulis erectus 18 x 0.4 m, Plerumque basi divaricator amosissimus, setulis brevibus appressiulis, praetera longioribus paucissimis hispidualus. Folia amina longiuscule petiolata, usque ad 25-40 mm. longa, 18-36 mm. Lata sed plerumque minor, ovato-ellipta, aut setulis brevissimis laxiuscule obsita, viridian, tomentosa, canescentia, apice obtuse vel prominentibus, margine integro, plano. Inflorescentiae simplices vel binae densiuscule scorpioideae, 4.5 x 0.3 cm, inflores - centiapetiolata 0.4 x 0.11 cm. calyces sessiles 1.6 mm. longi, laciniss 5 linear-lanceolatis acutiusculis appressiuscule longe pilosis canescentibus, persistentes. corolla calyce vix sesquiolongior, 2x1.4mm. longa, tube cylindraceo, extra longiuscule stringose intus glabro, limbo tubo duplo triplove brevior lobis 5 suborbicula-ribum vel subovatis rotundatis prime suberactis, dein patulis, aestivations imbricates, Antherae medium tubum sitae, a basi ad apicem stylo 0.2x0.2mm. Nuculae 1.5x2.1 mm ovalae, grosse rugulosae, glabrae. Type (Iraq FKI) 3K. North of Kirkuk, hilly area, sandy soil, 400 m alt. 30.7.1990 (holo BuH)

Annual, muricate, branched from base and hence plant often apparently multicaulescent, densely covered with short and long hairs, leave spetiolate, lamina elliptic-ovate, apex obtuse to roundish, the base attenuate to truncate, margins entire, nerves on the upper surface inconspicuous, raised and prominent below. Inflorescences scorpioid, uniseriate or biseriate flowers. Calyx persistent, sessile, lobes linear-lanceolate, acuminate, covered with long canescent trichomes. Corolla subroundish, erect and becomes spreading. Another sessile, inserted in middle of corolla-tube, gradually narrowed towards the acute apex. Stigma conical, glabrous. Style very short. Nutlets ovoid, grossly rugulose, glabrous. **H. muricatum** is similar to **H. lasiocarpum** but differs in its dark brown and quite glabrous nutlets, 1.3-

1.6x2-2-3 mm. in diameter. Corolla is smaller in size 1.4x2.7 mm. long. Anther is smaller and shorter in size 0.7x1 mm. Stigma is shorter and wider in size 0.7-1.5 mm. whereas the nutlets in **H. lasiocarpum** are light brown and densely hairy, 1.4-1.7x0.9-1.3mm. in diameter. Corolla is 2-2.2mm long. Anther is 0.8-1.1 mm. long. Stigma is 0.8-1.4 mm. long. in addition to the above characteristics, haploid chromosome number of **H. muricatum** was found 32. but in **H. lasiocarpum** 21. Moreover, variations are found in pollen grains, flowering period, ecological characteristics and geographical distribution, where **H. muricatum** has been found in a limited area 3 K. north of kirkuk while **H. lasiocarpum** is spread in most of the districts of Iraq. In addition **H. Muricatum** has scentless flower, while **H. lasiocarpum** has fragrance.



Herbarium of BUH  
 Technical Name: *Heliotropium muricatum*  
 Country: Iraq  
 Locality: 3K North of Kirkuk  
 Collector: Y. K. Abbas, B. M. Shamkhy  
 Date: 30.7.1990  
 Number: 3071990  
 Number of sheets: 1  
 Number of photos: 1  
 Number of drawings: 1  
 Number of illustrations: 1  
 Number of specimens: 1

### REFERENCE

1. Abbas, Y.K, Al-musawi, A. H. and Al-Attar, A. A (1993) A new species and two hybrids of *Heliotropium* l. (Boraginaceae) from Iraq. *Basrah j. Science*, Vol. 11 No. 1:81-i5. | 2. Boissier, E. (1879) *Flora orientalis*, Genevae et basileae Apud H. | George BibliopolamI ugduni. Vol.4:125-148. | 3. Riedle. H. (1967) *Heliotropium* L. in Rechinager, K. H. *Flora Iranica*. 48 Akademische Druch- Velagsantall, Graz-Austria, 9-52. | |