

## NEW NOTEWORTHY RECORDS FOR THE CYPERACEAE FLORA OF IRAN

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*Cyperus michelianus* as a new record and *Cyperus pygmaeus* as a noteworthy species are reported from the *Cyperaceae* flora of Iran. Exact localities based on the herbarium specimens are given. Main characteristics of each species and their geographical distribution are presented.

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*Key words.* *Cyperus michelianus*, *C. pygmaeus*, Geographical distribution, Iran, New records.

گزارشهای جالب و قابل توجه از فلور خانواده اویارسلام (*Cyperaceae*) در ایران

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*Cyperus michelianus* به عنوان گزارش جدید و *C. pygmaeus* به عنوان گزارش قابل توجه از فلور *Cyperaceae* در ایران ذکر می‌گردند. محل دقیق گونه‌ها بر اساس نمونه‌های هرباریومی، همچنین ویژگی‌های اصلی هر گونه و پراکنش جغرافیایی آنها توضیح داده شده است.

## Introduction

In the framework of our studies on the sedge family (*Cyperaceae*) in Iran, we have recognized a new record and a noteworthy species based on the herbarium materials. These materials have been received on loan from the herbaria IRAN, TARI and TUH (abbreviations according to Holmgren et al., 1990). The specimens have been carefully examined using different published keys on the family. The species is named as *Cyperus michelianus* that is reported for the first time from the sedge flora of Iran and a clear and sturdy report of the existence of *C. pygmaeus* is presented.

***Cyperus michelianus*** (L.) Delile, Descr. Egypte, Hist. Nat. 9: 50 (1813). (Fig. 3 in Shishkin, 1935, p. 48)

*Material examined.* Prov. Gilan, 5 km from Astara toward Hashtpar, Still wetland, 0 m, 20.9.1989, Zehzad, Pakravan & Taheri, 67319-1) (TARI).

*Main characteristics.* Spikes terets, Glumes spiral, sides not or faintly nerved, Stamen 1-2, Nuts  $0.8 \times 0.3$  mm with a crystalline rim.

*General distribution.* From C and S Europe to Turkey and Caucasus, Iran (N), east to the Altai Mts., Far East and China, S to Vietnam and N India also disjunct in Iraq.

***Cyperus pygmaeus* Rottb.**, Descr. & Icon. 20 (1773). (Fig. 479 in Feinbrun-Dothan, 1986).

*Materials examined.* **N:** Gilan, Bandar-e Anzali, Siah-keshim wetland, - 25 m, 14.10.1994, Eftekhari 78360 (TARI); Gilan, 5km from Astara toward Hashtpar, Still wetland, 0 m, 20.9.1989, Zehzad, Pakravan & Taheri, 67319-2) (TARI); **W:** Lorestan, Pol-e Dokhtar, Shafiiyan, 28382 (TUH); **S:** Fars, Shiraz, 32473 (IRAN).

*Main characteristics.* Spikes flattened, glumes distichous, sides clearly 2-3 nerved, Stamen

1-0, Nuts  $1-1.1 \times 0.4$  mm without a rim, often trigonous.

*General distribution.* Contrary to *C. michelianus*, *C. pygmaeus* is limited to southern areas, i.e. from Greece, Turkey, Israel to Egypt and Algeria, tropical Africa, S to Namibia, Madagascar, Mauritius, in Asia in Iraq, Talish, Iran (N, W & S), Pakistan, India and Ceylon and E to Taiwan, Philippines, Malaysia and Australia.

## Notes

Two allopatric taxa *C. pygmaeus* and *C. michelianus* belong to *Cyperus* subgen. *Micheliani* (C. B. Clarke) Kukkonen. These taxa have been treated differently as separated subspecies or species in the previous literatures (Shishkin, 1935; Walters, 1980; Davis & Oteng-Yeboah, 1985; Hooper, 1985; Feinbrun-Dothan, 1986). In accordance with the "Flora Iranica" (Kukkonen, 1998), we consider these two taxa as separated species. The presence of subgen. *Micheliani* in Iran was uncertain until now. Although *C. pygmaeus* was collected by Haussknecht from S Iran (Boissier, 1884) and has been recently listed (without herbarium number) by Asri & Eftekhari (2002) in their vegetation studies of Anzali lagoon but there is no certain report from the species of this subgenus in Flora Iranica (Kukkonen, 1998).

Considering the general distribution of these two allopatric species, it is obvious that the taxa meet each other in India, Caucasus and E Turkey, where mixed populations are reported (Davis & Oteng-Yeboah, 1985; Kukkonen, 1995). Based on this report, NW Iran is another place where the distribution of two species overlap.

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### References

- Asri, Y. & Eftekhari, T. 2002: An introduction to the flora and vegetation of Siah-Keshim wetland, -Journ. Environment. Studies 28 (2): 1-19.
- Boissier, E. 1884: Flora Orientalis. 5: 363-378.- Genevae et Basileae.
- Davis, P. H. & Oteng -Yeboah, A. 1985: *Cyperus*. In: Davis, P. H. (ed.) Flora of Turkey and the East Aegean Islands. 9: 34-41. -Edinburgh University Press, Edinburgh.
- Feinbrun-Duthan, N. 1986: Flora Palaestina. 4 (Text & Plate): 346-375 & 465-485. The Israel Academy of Sciences and Humanities, Jerusalem.
- Holmgren, P. K., Holmgren, N. H. & Barnett, L. C. 1990: Index Herbariorum I: The herbaria of the world, ed. 8. Regnum Veg. 20. New York Botanical Garden, New York.
- Hooper, S. S. 1985: Cyperaceae. In: Townsend, C. C. & Guest, E. (eds.) Flora of Iraq, 8: 331-406. Ministry of Agriculture & Agrarian Reform Republic of Iraq.
- Kukkonen, I. 1995: New taxa, new combination and notes on the treatment of Cyperaceae for Flora Iranica. Ann. Bot. Fenn. 32: 153-164.
- Kukkonen, I. 1998: Cyperaceae In: Rechinger, K. H. (ed.) Flora Iranica 173: 1-307. -Graz: Akademische Druch-u. Verlagsanstalt.
- Shishkin, B. K. 1935: Cyperaceae. In: Komarov, V. L.(ed.) Flora of the U.S.S.R., 3: 1-512 (English Translation by N. Landau, 1985), Bishen Singh Mahendra Pal Singh and Koeltz scientific books.
- Walters, S. M. 1980: Cyperaceae. In: Tutin, T. G. et al. (eds.) Flora Europaea, 5: 276-323. Cambridge University Press, Cambridge.

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