

***STRUCHIUM SPARGANOPHORUM* (L.) KUNTZE (ASTERACEAE): A NEW
ANGIOSPERM RECORD FOR THE FLORA OF BANGLADESH**

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Asteraceae is one of the largest plant families, with thousands of species. Asterideae has a significant productivity as angiosperm phylogeny. There are 24,000 recognized species in the Asteraceae plant family. It also has roughly 1,600 to 1,700 genera that are found all throughout the planet, with the exception of Antarctica. This family is also known as a cosmopolitan family since it has a large number of species from several climate zones, including temperate, cold-temperate, and subtropical (Flora of China, 2022). For the genus *Struchium*, the Plant List comprises 17 scientific plant names of species rank. These are the only three species names such as *Struchium africanum* (Steud.) P.Beauv. *Struchium americanum* Poir., and *Struchium sparganophorum* (L.) Kuntze that have been accepted (The Plant List, 2013).

Struchium sparganophorum (L.) Kuntze, an annual, semi-aquatic herb was collected from Amki, Sonaimuri, Noakhali, Bangladesh in the month of March, 2022 by the first author. After critical studies, it has been identified as *Struchium sparganophorum* (L.) Kuntze with the help of floristic literatures and databases viz. Bunwong *et al.* (2014), GBIF (2022), India Biodiversity (2022), WFO (2022), Flowers of India (2022), POWO (2022a). *Struchium sparganophorum* (L.) Kuntze belong to the Asteraceae. The sessile capitula in the axillary head, achenes with coroniform pappus, and florets with 3-4 corolla lobes are the distinct characters of *S. sparganophorum* (Bunwong *et al.*, 2014).

As this genus and any of its species have never been reported in any of the pertinent floristic literature covering Bangladesh region viz. Roxburgh (1832), Hooker (1872-1897), Prain (1903), Heinig (1925), Cowan (1928), Raizada (1941), Datta and Mitra (1953), Sinclair (1956), Khan and Banu (1972), Khan and Hassan (1984), Khan *et al.* (1994), Mia and Khan (1995), Rahman and Hassan (1995), Rahman and Uddin (1997), Uddin *et al.* (1998), Uddin and Rahman (1999), Rashid *et al.* (2000), Khan and Huq (2001), Rahman *et al.* (2002), Uddin *et al.* (2003), Rahman (2004a, b), Ahmed *et al.* (2008), Rahman and Uddin (2011), Rahman and Uddin (2012), Pasha and Uddin (2013), Uddin *et al.* (2013), Rahman *et al.* (2016), Rashid *et al.* (2016), Rahman (2017), Uddin and Hassan (2018), Rahman *et al.* (2019) therefore, it is being reported as a new generic and species record for Bangladesh. Specimens (n=2) of species were collected and photographs of species in their natural habitat were taken during a field trip. The collected specimens were deposited in Chittagong University's Herbarium (HCU).

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The detailed description and photographs of the plant are given below.

STRUCHIUM P. Browne. In: Hist. Jamaica. 312. t. 34. (1756).

Annual herb. Leaves alternate. Capitula congested in axillary sessile clusters, homogamous, many-flowered; phyllaries in several series, imbricate, slightly unequal, the innermost longest. Florets 3-4-lobed; anthers sagittate, with triangular distal appendage; style branches subulate. Achenes slightly angular with 3-4 angles, glandular; pappus a thick, oblique corona.

This genus is native range is SE. Mexico to Tropical America (POWO, 2022b).

Struchium sparganophorum (L.) Kuntze, Revis. Gen. Pl. 1: 366 (1891). *Ethulia sparganophora* L., Sp. Pl.: 1171 (1763); *Sparganophoros vaillantii* Crantz, Inst. Rei. Herb. 1: 261 (1766); *Ethulia struchium* Sw., Prodr. 111 (1788). **(Fig. 1)**

Type: *Sparganophorus vaillantii* Crantz Vaillant, S. MNHN P P00682416 (*Type*)

Struchium sparganophorum (L.) Kuntze George Richardson Proctor (1959) Guadeloupe. BM000576316 (*Epitype*)

Sparganophorus vaillantii Gaertn. var. *Griseb. longifolius* Wright, C. (no. 1025 = 2783) (1863) Cuba. GOET 002448 / 753024 / 396451; *Sparganophorus vaillantii* Gaertn. var. *longifolius* Griseb. WRIGHT (1863) GOET-Typen 6048; *Struchium sparganophorum* (L.) Kuntze. MO 101128505 (*Holotype*).

Struchium sparganophorum (L.) Kuntze Charles (Carlos) Cuba. MO MO 2593200; *Struchium sparganophorum* (L.) Kuntze Wright, C. K K K000373105 (*Isotype*).

Struchium africanum P. Beauv. Palisot de Beauvois, A. M. F. Benin. G Geneva Herbarium – De Candolle's Prodromus (G-DC) G-DC-279850/2 (*Syntype*).

Annual, 30-60 cm tall, erect, branching, semi-aquatic herbs with green, scattered finely velvet-hairy stems. Leaves simple, alternate, exstipulate; leaf-stalk to 2.5 cm long, base amplexicaul with minutely hairy margin; lamina elliptic, narrowing at both ends, acute, margins minutely toothed-finely toothed. Inflorescence axillary, of 4-5 subsessile, clustered, globose, homogamous capitula, hairy when young. Mature head about 5 mm diam; involucre of 4-5 series of ascending, outer smaller and inner larger, triangular to inverted-lanceshaped, tapering, greenish, margins scarious and hairy. Receptacle convex, pitted. Florets all tubular, without palea, 4-5 mm long, hermaphrodite. Calyx of three, white, spongy, acute scales .united in varying degree, often lightly, .unequally lobed at apex, valvate, persistent. Corolla about 2-3 mm long, white, with narrow tube, lobes 5, spreading glandular. Androecium of three epipetalous stamens; filaments short, filiform, white. Ovary about 1.5 mm long, with three or more vertical ridges and glands on surface. Ovule solitary, basal, anatropus, slightly flattened. Style filiform, white, with a minute disc-like joint at base. Stigma bifid, subulate, purple, outer surface shortly hairy, receptive surface papillose. Fruits about 1.5 mm long, triangular, blackish. Seed obovate-lenticular.

Flowering and fruiting: August-April.

Ecology: Grows in waste places by the sides of the canal.

Specimen examined: Noakhali: Amki (Latitude: 23.058877, Longitude: 91.032303), 06.03.2022, Uddin, M.S. and Uddin, S.B., HCU06032022-132 (HCU).

Distribution: Native of tropical America, not it distributed in all warmer countries (India Biodiversity 2022).

Uses: *Struchium sparganophorum* is a medicinal herb used in traditional medicine, a decoction made with the whole plant is taken for the treatment headache, cold, wheezing, asthma and Backaqche (Fern, 2022). Leaves cooked as vegetable. Used as a condiment in soups (Uphof, 1959).



Fig. 1. *Struchium sparganophorum* (L.) Kuntze a. habit ($\times 0.5$); b. Branch ($\times 0.5$); c. Inflorescens ($\times 0.5$); d. Ray florule ($\times 5$); e. Disc florule ($\times 5$); f. Androecium ($\times 8$); g. Gynoecium ($\times 10$).

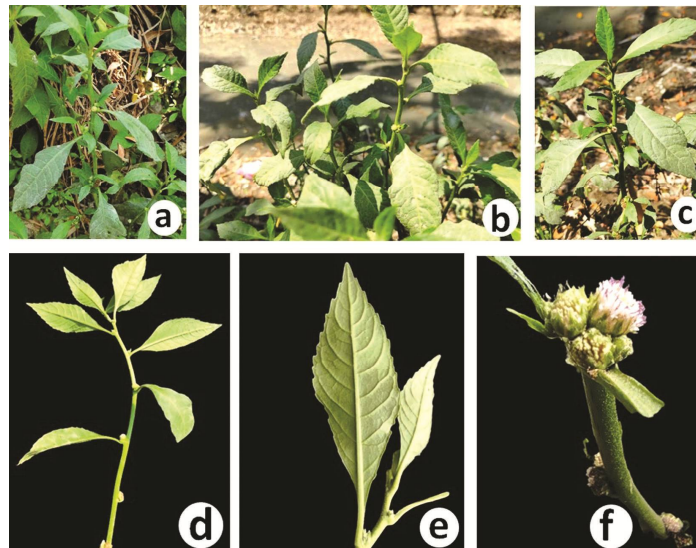


Plate 1. *Struchium sparganophorum* (L.) Kuntze (a, b, c) Herbs in natural habitat; (d) Habit: a part of flowering branch; (e) Leaf; (f) Inflorescences.

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