

NEW SPECIES OF CUSCUTA AND PHLOX FROM OKLAHOMA

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In southeastern McCurtain County, in a Coastal Plain flora which extends into the state along the Red River, there is a species of distinct-sepalled *Cuscuta* apparently resembling *C. compacta* Juss. However, the new species has flowers usually pedicellate, the pedicels up to 4 mm long, a bract at the base of the pedicel only; sepals are ovate-lanceolate to rather narrowly lanceolate, the tips attenuate, tending to become carinate; corolla lobes are deltoid-ovate, spreading at full anthesis, about equalling the tube; corolla deciduous from the mature fruit; infrastamineal scales ovate-oblong, fringed, the fringe extending about half way up the filaments, sometimes visible slightly above the bases of the corolla sinuses; fruits slightly depressed-globose.

C. compacta has flowers sessile, or essentially so, subtended by two or more ovate-orbicular bracts; sepals are ovate to ovate-orbicular, obtuse, resembling the bracts; corolla lobes much shorter than the tube; corolla investing the top of the mature fruit; infrastamineal scales oblongish, the fringes reaching the bases of the filaments; fruit ovoid to ovoid-globose.

The pedicellate condition might remind one of *C. cuspidata* Engelm., but that species has a much more open inflorescence, smaller flowers, usually 1 or 2 ovate, sometimes cuspidate bracts on each pedicel, sepals ovate-orbicular, corolla lobes oblong-ovate, shorter than the funnelform tube, corolla persistent on the subglobose fruit.

C. attenuata Waterfall, sp. nov., floribus densis, pedicellatis; pedicellis ad 4 mm longis; bracteis solitariis; sepalis distinctis vel subdistinctis, ovato-lanceolatis vel angustolanceolatis, apicibus attenuatis; corollo-lobis deltoidovatis, tubum aequantis; fructibus depresso-ovoideis.

Holotype: *Waterfall* 17157 (OKLA), Waterfall Creek, 8

miles south and 2 miles east of Idabel, McCurtain County, Oklahoma, Oct. 10, 1964. It was growing on *Iva ciliata*. Isotype (GH).

Another collection is *Waterfall* 17496 (OKLA), on *Iva ciliata*, edge of pond in Waterfall Creek, 7 miles south and 1.5 east of Idabel, McCurtain Co., Oct. 3, 1970.

The polysepalous condition and the dense aggregations of flowers would indicate *C. attenuata* as belonging to subsection *Lepidanche* Engelm. (Yuncker, 1965). However, the presence of a single bract at the base of the pedicel, and the depressed-globose capsule suggest the desirability of creating a new subsection for this new species.

The author has long been aware of an anomalous *Phlox* in southwestern Oklahoma, especially in the granitic areas extending west and northwest of the Wichita Mts proper, which are largely in, and north of, the Wichita Mountains Wildlife Refuge in Comanche County. This is the taxon listed as "*Phlox* sp. ined." in my KEYS . . . (Waterfall 1969, and previous editions, 1962 and 1966).

This was treated by Wherry (1955) as *Phlox pilosa* L., subsp. *latisepala* Wherry (*P. aspera* E. Nels., 1899, non *P. aspera* Muhl., 1813). The differences in the next paragraph are shown largely by comparison with the holotype of *P. aspera* E. Nels., *Heller* 1641 (MO).

P. longipilosa differs most obviously from subsp. *latisepala* in having long, jointed hairs, 2-4 mm long, on the calyx where they are sometimes very abundant, on the stem, and often the leaves. The hairs of subsp. *latisepala* are mostly under 0.5 mm long. The sepals of *P. longipilosa* are 10-12 mm long, apically attenuate-awned, and often somewhat twisted; those of subsp. *latisepala* are 8-10 mm long. The new species has upper leaves alternate, sometimes as many as 7-8 being so; subsp. *latisepala* has them opposite, sometimes 1 or 2 being closely alternate. Fruits of *P. longipilosa* are 3-3.5 mm wide; those of subsp. *latisepala* are 2.5-3 mm wide.

It might be compared, in some respects, with *P. pilosa* var. *pilosa* which has many hairs 0.5-0.7 mm long, some-

times a few 1 mm long; the leaves are uncrowded, usually 5-9 pairs, the upper leaves normally opposite. *P. longipilosa* has leaves crowded, growing from 10-18 nodes.

Phlox longipilosa Waterfall, sp. nov. Planta erecta, 20-45 cm alta, perennis; caulibus pluribus; foliis congestis e 10-18 nodis, linearo-lanceolatis vel linearibus, integris, supernis alternatis, infernis oppositis; calicibus et caulibus, et interdum foliis, longipilosis; trichomatibus articulatis, 2-4 mm longis; calycibus ca 10-12 mm longis; fructibus 3-3.5 mm latis.

Holotype: *Waterfall* 13134 (OKLA) northern slopes of granite mountains south of Lake Altus, Kiowa County, May 29, 1957. Isotypes: (GH, OKL, others to be distributed).

Other collections seen: **Oklahoma.** COMANCHE CO.: *C. T. Eskew* 1714 along foot of hills and streams, Wichita National Forest, May 9, 1937 (OKL). KIOWA CO.: *Waterfall* 9449 (OKLA) northern slopes of granite mountains, south of Lake Altus, May 14, 1950; *Waterfall* 11985 (OKLA) slopes of granite mountains southwest of Lake Altus, June 4, 1954; *Milton Hopkins*, & *Aven & Ruth Nelson* 240 (OKL) among boulders on granite hill in Quartz Mt. State Park, Apr. 30, 1944. GREER CO.: *Waterfall* 7247 (OKLA) southern slopes of Granite Mountains, north of Granite, June 21, 1947; *Ruth Logan* 98 (OKLA) Granite Park, Granite, Apr. 27, 1952; *G. W. Stevens* 1013 (OKL, OKLA) on mountainside, Granite, June 17, 1913 .

LITERATURE CITED

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