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## NEW SCLEROCACTUS (CACTACEAE) FROM NEVADA

Ken Heil<sup>1</sup> and Stanley L. Welsh<sup>2</sup>

ABSTRACT.—Named as new is *Scleroactus schlesseri* Heil & Welsh. The taxon is described and its relationships discussed.

During the summer of 1981 a peculiarly adapted population of *Scleroactus* was discovered by cactus enthusiast Dr. David Schlessler in the southeastern quadrant of Nevada, growing on a peculiar, Tertiary lacustrine deposit. The substrate consists of sandy silts to silty clays and appears on the surface to be somewhat gypsiferous. Vegetation in the region consists of typical salt desert shrub community, with galleta (*Hilaria jamesii*) as the main perennial grass component. The long, ribbonlike, uppermost central spines simulate the leaves of the galleta, and the stems are difficult to discern among the grassy areas between the shrubs.

The plants occur singly or in small clumps. General aspect is that of *Scleroactus whipplei* in a broad sense, but the stem diameter of the plants examined is not as great (4–8 cm, not 5–15 cm), flowers average smaller (3–4 cm, not 3.5–5 cm long), and the spines are densely pubescent, at least when young. The pubescent spines and characteristic flattened upper central spine approaches the condition found in *S. pubispinus* of the nearby Great Basin. The flowers average larger than in *S. pubispinus* (3–4 cm, not 2.5–3.5 cm) and the upper central spine is longer (3–5.5 cm, not 0.5–3.5 cm). The locality is intermediate between that of *S. pubispinus* and *S. whipplei* var. *roseus* as interpreted by Welsh (1984). A specimen of the latter was taken along the Virgin River west of Bunkerville, Nevada, by N. D. Atwood (7821b BRY) in May 1981. A locality for *S. whipplei* (as *S. parviflorus* var. *intermedius*) is mapped from Iron County in southwestern Utah by Benson (1982).

Although some features of the plant discovered by Dr. Schlessler are intermediate be-

tween *S. whipplei* and *S. pubispinus*, there are some features that are evidently unique. The narrow stems suggest a parameter that is not shared by the two close geographical congeners. Because of the discordant as well as intermediate features the plant is named as follows:

*Scleroactus schlesseri* Heil & Welsh sp. nov. Persimilis *Scleroactos whipplei* (Engelm.) Britt. & Rose sed in caulibus angustioribus (4–8 cm nec 5–15 cm), floribus minoribus (3–4 cm nec 3.5–5 cm), et spinis pubescentibus differt, et similis *Scleroactos pubispino* (Engelm.) L. Benson in floribus majoribus (3–4 cm nec 2.5–3.5 cm) et spinis superioribus centralis differt.

Stems dark green, typically solitary, ellipsoid to obovoid, 3–10 (14) cm tall, 4–6 (8) cm wide; ribs 13; tubercles 12–18 mm wide, 8–10 mm long; areoles woolly, finally glabrate; spines flexible, densely pubescent when young; upper central spine 1, ascending, flat or trigonous, ribbonlike, curved, cartilaginous to bony, pubescent to glabrous, 3–5.5 cm long, 1–2.5 mm wide, reddish brown to white; peripheral central spines 2, ascending, flat, ribbonlike, sometimes hooked, pubescent, 2–3 cm long, 0.5–1 mm wide, black to white; lower central spine 1, ascending, flexible, irregularly hooked, pubescent, 2.5–4.5 cm long, to 1 mm wide, black, gray, tan, or white; radial spines 6–9 (12), flattened, flexible, pubescent, 3–14 mm long, white; flowers apical on upper end of the tubercles near the top of the areoles and above the spines, funnelliform, 3–4 cm long, 2–3 cm wide, violet pink; sepaloid perianth parts oblanceolate, finely irregularly toothed apically, mucronate, violet pink with brown-

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ish midstripes, 1.5–2 cm long, 6–10 mm wide; petaloid perianth parts oblanceolate, entire or slightly undulate, minutely toothed apically, violet pink, 1.5–2 cm long, 4–5 mm wide, filaments red, anthers yellow; stigma lobes 7–9, light green; fruit dry, barrel shaped, naked or with 1 or 2 scales, 1–1.5 cm long, 9–13 mm wide, red to greenish red, dehiscent by a transverse break in the ovary wall, the perianth persistent; seeds 2 mm long (hilum to point opposite), 3 mm wide, ca 1 mm thick, pyriform with slightly flattened apex,

shiny black, papillate, becoming less so near the hilum; hilum elliptic, 1 mm wide.

TYPE.—USA. Nevada. Lincoln County, Tertiary lacustrine deposit at ca 1,464 m in salt desert shrub-grass community, 16 June 1983, K. Heil s.n. (Holotype BR; isotype NY).

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