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A NEW SPECIES OF *HECHTIA* (BROMELIACEAE, PITCAIRNOIDEAE)
FROM THE CAPE REGION, BAJA CALIFORNIA SUR, MEXICO

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ABSTRACT

Hechtia gayii is described and illustrated and its relationship to other members of the genus is discussed.

In the spring of 1968, Ed and Betty Gay of Tarzana, California, discovered, in a small cañada near the beach west of San José del Cabo, a hillside "covered with hechtias" (Gay 1969). Propagules were collected, some of which were later presented to the Huntington Botanical Garden, San Marino, California, and subsequently introduced into the horticultural trade under the name *Hechtia montana* 'Burgundy.' The clone name was in reference to the distinctive red coloring of the leaves as seen in cultivated plants.

The only *Hechtia* recorded in Baja California is *H. montana* Brandegee, which, though described by Smith and Downes (1974) as imperfectly known, is a common plant on mountainous hillsides in the Cape Region of southern Baja California, often growing in large masses and known locally as *magueycillo*. The species also is known on the mainland in Sonora and Sinaloa (Shreve and Wiggins 1964). When a plant from the Gay collection grown at the Rancho Santa Ana Botanic Garden bloomed during March, 1994—the only plant known to have bloomed under cultivation—it became evident that it was not *Hechtia montana*. A search of the literature discloses that it apparently represents an undescribed species.

***Hechtia gayii* L. W. Lenz, sp. nov. Fig. 1–4, 5**

Plantae saxatiles, parva per generis, acaules, rosulas compactas ca. 30 cm in diametro facientes; propagula basi numerosum; folia recurvata (hortensi sanguineo-grisei), dense imbricata, usque ad 15 cm longa; laminae lineari-trianguulares, acutae, 2–3 cm latae, marges fortiter spinosae, dentibus unciiformibus brunneo-vinosibus, infra lepidotae; scapus erectus, cylindraceus, ca. 65 cm longus, ca. 7 cm in diametro, simplex; rami simplices usque ad 7.5 cm longi, horizontales vel ascendentes, tomentosi; rachis crassa, cristis tenuibus decurrentibus infra flores descententibus; bractae infimae foliiformes dentibus unciiformibus; bractae summae reductae, triangulares, sine dentes; flores non congestae, ca. 20, singulares levites longior quam pedicelli; flores pistillatae infra, flores perfectae paucae ad centrum inflorescentiae; flores pistillatae parvae, non expansae, pedicelli ca. 5–7 mm longi; sepala triangularia, pubescentia, basi brunneolia, usque ad 3 mm longa; petala viridis, obovata, usque ad 3 mm longa, apex acutus; stamina imperfecta inclusa; ovarium superum, laeve,

glabrum, penitus 2–3 sulcatum inter carpellum; flores staminati crateriformia, saepe 4-merous; apices cuspidati; pedicelli brevi; longitudo staminum prope longitudo petalorum; fructus ignotus. Typus *L. W. Lenz 9401*: RSA.

Plants saxicolous, small for the genus, acaulescent, forming compact rosettes ca. 30 cm across; offsets basal, numerous; leaves recurved, gray-green (reddish green in cultivation), densely imbricate, to 15 cm long; blades linear-triangular, acute, 2–3 cm wide, margins strongly spinose with reddish-brown, uncinuate teeth, lepidote on the under side; scape erect, cylindrical, ca. 65 cm long, ca. 7 cm in diameter, simple; branches simple, to 7.5 cm long, horizontal to ascending, tomentose; rachis stout, with fine ridges decurrent from the flowers; lowermost bracts leaflike, with uncinuate teeth; upper bracts reduced, triangular, without teeth; flowers not congested, ca. 20 borne singly, slightly longer than the pedicels; pistillate flowers below, staminate flowers above; perfect flowers toward the center of the inflorescence, few; pistillate flowers small, not spreading, pedicels ca. 5–7 mm long, sepals triangular, pubescent, brownish at the base, up to 3 mm long; petals greenish, obovate, up to 5 mm long, with acute tips; nonfunctional stamens included; ovary superior, smooth, glabrous, deeply 2–3-sulcate between carpels; staminate flowers bowl-shaped, often 4-merous, tips cuspidate, pedicels short, stamens nearly as long as petals; fruit unknown.

Etymology.—Named for Mr. and Mrs. Ed. Gay, collectors and students of the Cactaceae.

Type.—MEXICO. Baja California Sur; 9.4 mi [along old road] W of San José del Cabo; abundant on granite outcrops in small cañada not far from beach [s.n.]. Known only from the type collection made by Ed. and Betty Gay, April, 1968. Cultivated offset from original collection (RSA propagation number *BC183308*) *L. W. Lenz 9401* (HOLOTYPE: RSA [two sheets]).

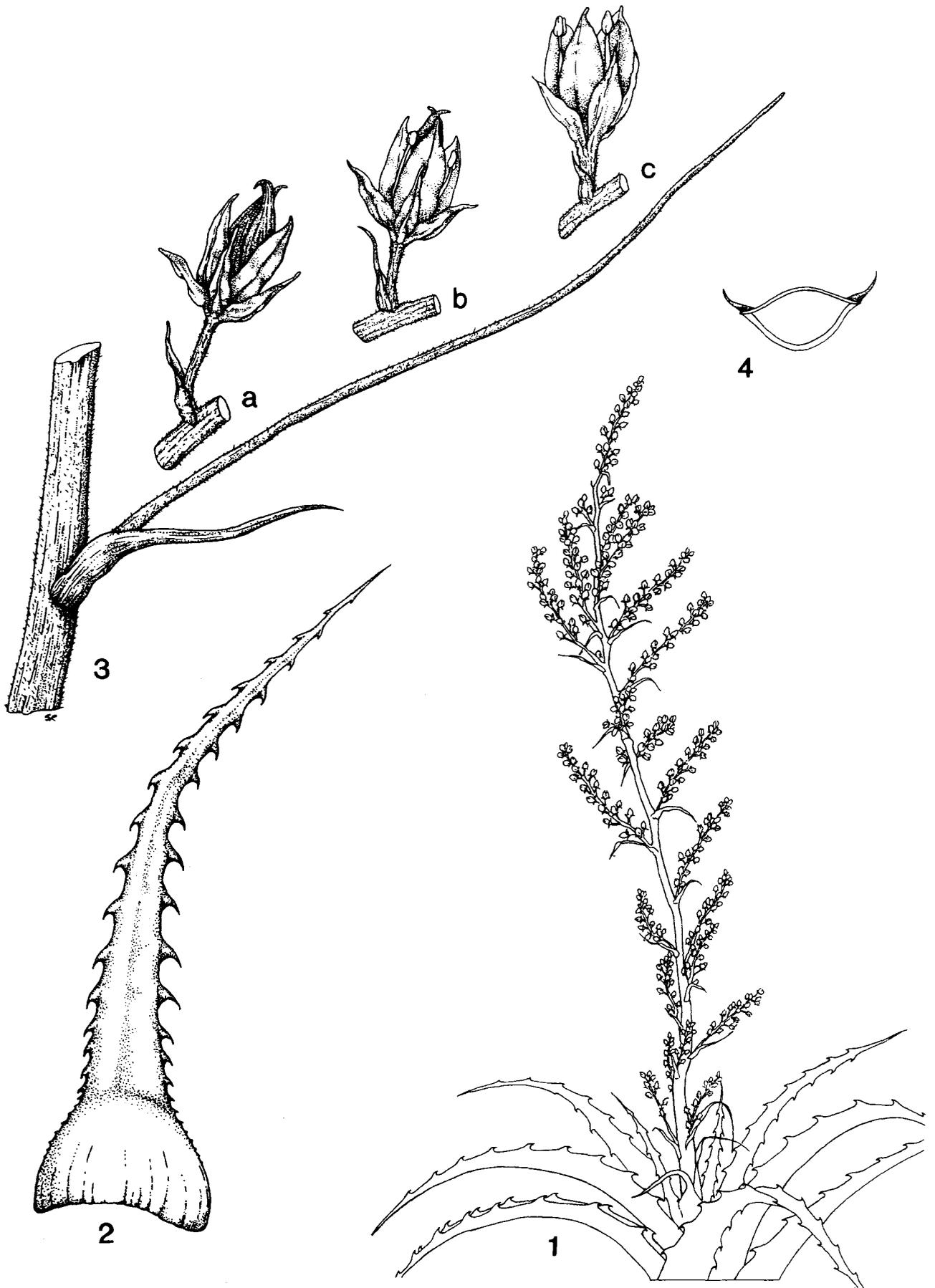


Fig. 1-4. *Hechtia gayii*.—1. Plant habit, $\times 0.25$.—2. Leaf, $\times 1$.—3. Portion of inflorescence: a, pistillate flower; b, perfect flower; c, staminate flower. All $\times 3$.—4. Transection of leaf, $\times 1.25$.

Relationships

Hechtia gayii differs from all other described hechtias in being monoecious; however, in other species some remnant of the nonfunctional sex is usually present (Smith and Downes 1974). In many of the species of *Hechtia* differences between the sexes is often so extreme that it is necessary to key them separately (Smith 1937).

In their treatment of the neotropical members of *Hechtia* (Smith and Downes 1974), *H. gayii* keys out most closely to *H. pedicellata*, a saxicolous endemic known only from a barranca near Guadalajara, Jalisco (Fig. 5). The latter differs from *H. gayii*, however, in having a densely cylindrical bipinnate inflorescence.

In *Flora Novo-Galiciana* (McVaugh 1989) *Hechtia gayii* keys out most closely to *H. subalata* L. B. Smith of southern Durango, southern Zacatecas, northern Nayarit and northern Jalisco (Fig. 5), and *H. jaliscana* L. B. Smith, an endemic known only from rocks in the barranca of Río Grande de Santiago, Jalisco (Fig. 5), where it grows at elevations of 700–800 m. Other than being monoecious, *H. gayii* differs principally from *H. subalata* in being smaller, in having flowers not congested on the stem, and in having ovaries deeply sulcate between the carpels. It shares with *H. subalata* a subterete rachis with fine ridges decurrent from the flowers and fiercely spinose-margined leaves. Both species occur on rocks and bluffs, *H. subalata* in the *matorral* associated with *Acacia*, *Cercidium* and *Fouquieria* at elevations of 800–1500 m, and *H. gayii* (Fig. 5) in the San Lucan thorn scrub growing with members of the above three genera but at nearly sea level. *Hechtia gayii* differs from *H. jaliscana* in having a smaller nonbranched inflorescence, with flowers not congested along the branches, whereas, so far as known, *H. jaliscana* has a twice compound, loosely

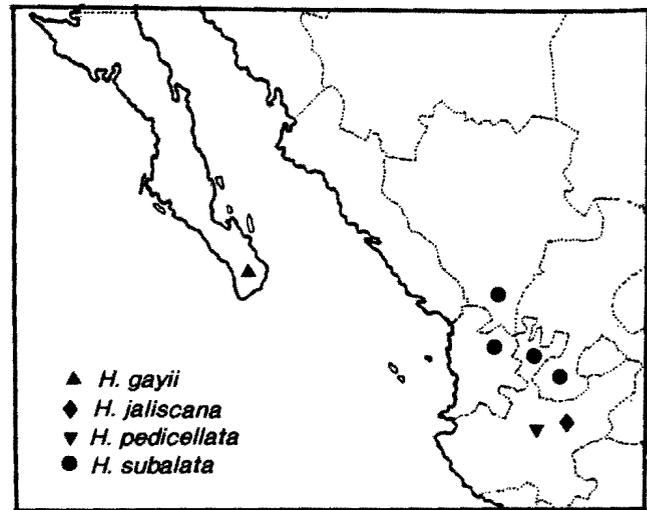


Fig. 5. Distribution of four species of *Hechtia* in Mexico.

branched inflorescence ca. 1 m high (McVaugh 1989) with flowers densely congested along the branches. *Hechtia jaliscana* occurs on rocks at elevations of 750–800 m.

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