Stanhopea

J. Frost ex **Hooker** Bot. Mag. **56**: tt. 2948-2949 (1829).

ETYMOLOGY: Honoring Philip Henry (l78l-l855), a British lord and the 4th Earl of Stanhope and a past president of the London Medico-Botanical Society during the l830's. The word stanhope means stony and hollow.

TYPE SPECIES: *Stanhopea insignis* J. Frost ex Hooker

DESCRIPTION: Stanhopea flowers are distinguished by twin fleshy horns projecting from the middle of the lip, earning the nickname El Torito, or "little bull." Flower: Large, flaring sepals curl back at the tips, as do smaller petals. Both are usually creamy or yellow, with purplish mottling. The long, thin, and arching column bears wings near the tip. The waxy, downward-hanging lip is a complex, 3-part structure. The lowest region is glisteningly smooth and usually pointed; the narrow central area bears twin horns, ranging in size from goat to longhorn steer; the base is con- cave, resembling a wooden clog. Most species have large (to 8" [20 cm]), strongly perfumed flowers. Plant: Pseudobulbs are tall 2 - 3" (5 - 7.5 cm), fluted, and wrapped by fibrous sheaths when young. From atop each pseudobulb arises a large, stiffly pleated leaf with a distinct petiole. The inflorescence of 2 to 12 flowers or more hangs below the pseudobulb base.

DISTRIBUTION: More than 60 species occur as epiphytes and a few terrestrials in low- to middle-altitude humid forests. They are found from Mexico and Trinidad to Bolivia and Brazil.

ECOLOGY and HISTORY: Flowers advertise their brief availability with strong scents, beckoning male euglossine bees that collect fragrance blends exuded near the lip base. Some claim these odors intoxicate the bees, hampering their flying ability. Others dispute the drunken bee theory, but bees do routinely lose their grip and fall down the slippery lip, herded between the horns. Plummeting, they brush the column and pick up, or deposit, pollinia. One evolutionary problem with fragrance rewards is that pollinators return repeatedly to the same flower, which risks self-fertilization. Stanhopea avoids this through sequential male and female floral phases. Once oversized pollinia are removed, the undersized stigmatic area enlarges; meanwhile, drying pollinia shrivel until a fit (in a second flower) can be achieved. Flowers wilt in 2 to 4 days, saving energy. *Stanhopea anfracta*, an inhabitant of stormy mountainsides, remains open a few days longer, however, awaiting the rare sunny day when fragrance-collecting bees are active. These scents are harvested not only by bees: Mexicans gather *S. tigrina* to perfume corn tortillas, while Ecuadorians use eucalyptus-scented *S. anfracta* to treat coughs.