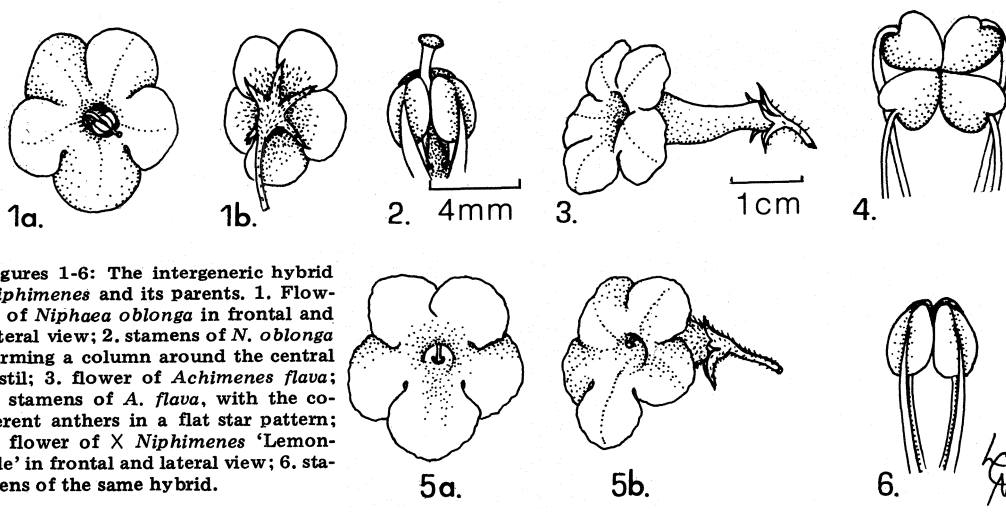


× *NIPHIMENES* (*NIPHAEA* × *ACHIMENES*),
A NEW HYBRID COMBINATION IN THE GESNERIACEAE

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The genera *Niphaea* Lindley and *Achimenes* Persoon belong to the neotropical tribe Gloxinieae Fritsch. The species of both genera are herbs with underground scaly rhizomes and have a base chromosome number of $n = 11$. The distinguishing features of *Niphaea* are a rotate (saucer-shaped), nearly actinomorphic, white corolla, similar to that of the potato and tomato (Figure 1), and an androecium of four fertile stamens surrounding the central pistil. The anther cells face toward the inside of the ring formed by the coherent anthers (Figure 2). The stigma is club-shaped, and the nectary is absent. In *Achimenes* the corolla is tubular, usually with a broad limb (Figure 3). The four stamens are free from the pistil; the coherent anthers form a square or rectangular unit, with the anther cells facing downward on a single plane (Figure 4). The stigma is bilobed in most species. There is also a prominent, ring-shaped nectary surrounding the base of the ovary.

The new intergeneric hybrid reported here involved *Niphaea oblonga* Lindley from Guatemala and Chiapas, Mexico as the seed parent, and *Achimenes flava* Morton from western and southern Mexico as the pollen parent. The hybrid, labelled × *Niphimenes* 'Lemonade,' displays an interesting combination of the parental features. The low, compact plant habit appears to be intermediate between that of the parents. The stems and petioles are light reddish brown. The pale green leaves (ca. 7 × 4 cm) have the reddish brown veining of the seed parent. The upper surface of the leaves is covered with short, white, bristling hairs as in the pollen parent. The axillary flowers have pedicels about 3.5 cm long. The calyx is of a similar shape in both parents and in the hybrid. The hybrid has a distinct corolla tube 0.5 cm long, and a flat limb ca. 2.5 cm in diameter, with the lobes almost equal as in *Niphaea oblonga* (Figure 5). The corolla tube and the limb are creamy lemon-yellow



Figures 1-6: The intergeneric hybrid *Niphimenes* and its parents. 1. Flower of *Niphaea oblonga* in frontal and lateral view; 2. stamens of *N. oblonga* forming a column around the central pistil; 3. flower of *Achimenes flava*; 4. stamens of *A. flava*, with the coherent anthers in a flat star pattern; 5. flower of × *Niphimenes* 'Lemonade' in frontal and lateral view; 6. stamens of the same hybrid.

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Editor's note: This paper is significant in that the parental genera of the hybrid were until recently placed in separate tribes, partially due to the distinct structures of the corollas (indicating different pollination syndromes). The hybrid helps to demonstrate the potential of genetic flexibility within the Gesneriaceae. Voucher material of the hybrid will be deposited at the SEL herbarium.

(R.H.S. Colour Chart: Orange-Yellow 14C), and the throat and the tube inside is a deeper yellow. The anthers are joined in a circle as in *Niphaea*, but the filaments are longer, and the androecium is independent from the pistil, as in *Achimenes* (Figure 6). The stomatomorphic stigma is intermediate in shape to that of the parents. The hybrid has also a ring-shaped nectary.

The size of the face of the flower (2.5×2.5 cm) is surprisingly large, larger than either parent. The corolla limb of *Niphaea oblonga* is about 2×2 cm, and that of *Achimenes flava* about 1.5×1.5 cm.

It is usually not easy to self-pollinate *Niphaea oblonga*, and this intergeneric cross is the first positive result after many failing attempts to cross-breed this species. I had six good seed pods at the end of a long flowering season. The first seedlings took about five months to germinate, and the seed continued to germinate a few at a time over the next six months. The first flowers opened on 20 July 1979, and \times *Niphimenes* 'Lemonade' was displayed the same day at the National Convention of the American Gloxinia and Gesneriad Society in nearby Danvers, Massachusetts.

Reciprocal crosses have been made, using several *Achimenes* hybrids as seed parents, and two other genera have also been crossed with *Niphaea oblonga*, but none of these alleged hybrids have bloomed at this time. The first flowers of \times *Niphimenes* 'Lemonade' have been self-pollinated, as there appeared to be some fertile pollen. I am hopeful about an F_2 generation.



Figures 7-8: Flowers of \times *Niphimenes* 'Lemonade' in frontal and lateral view, converted from color slides taken by Patrick Worley.

