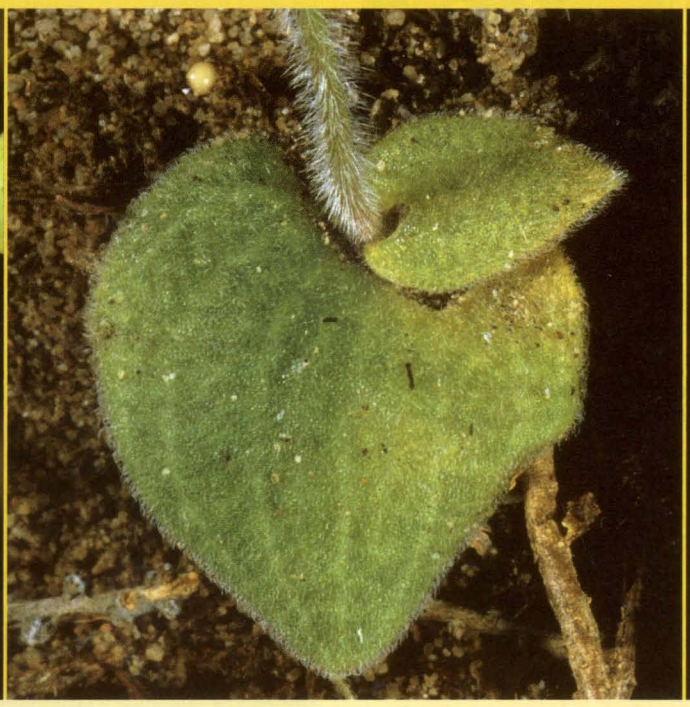
The discovery of the orchid, *Holothrix longicornu* G. J.Lewis, on the Cape Peninsula



ABOVE LEFT AND RIGHT: An exciting find! The presumed extinct orchid, *Holothrix longicornu*, was discovered flowering on the southern Cape Peninsula in October 2004. The flower diameter is 3-5 mm. Photos: Helmuth Zelesny.

CENTRE: The leaf of the thread orchid, *Holothrix longicornu*. Photo: William Liltved.

by **William Liltved**

Holothrix longicornu, described by Joyce Lewis in 1938, was, until recently, known from a single collection (*Cutting s.n.*; BOL no. 72340) of ten plants made by W. G. Cutting, 'a keen collector and cultivator of Orchidaceae', in the vicinity of Port Elizabeth, on 30 October 1937. Since the original gathering of *H. longicornu* was made, the suburbs of Port Elizabeth have expanded greatly. It had been presumed that should populations of this orchid have been localized to only this area, the species would by now be extinct.

During frequent surveys of an area of diverse, scrubby fynbos rich in fragrant buchus (*Diosma* and *Agathosma*) on the southern Cape Peninsula, I have for some time noticed the conspicuously veined leaves of an unidentified species of *Holothrix*. Flowering plants of this species were first noticed at this site on 26 October, 2004, during an excursion with the German orchid photographers Helmuth Zelesny and Ulrich Ade. It was not until 2006 that the species was positively identified as the presumed extinct *H. longicornu*, previously found 670 km due east. The black and white photographs provided by Lewis in 1938 (shown opposite), of flowers from specimens of the type collection, clearly show the glabrous (smooth) sepals, five-lobed lip and nearly straight, conical spur of the lowermost flowers of *H. longicornu*. These characters perfectly match the plants of *H. longicornu* found on the Cape Peninsula. Likewise, the clustered arrangement of the up to twenty-eight flowers on the topmost part of the long-stemmed (65 mm-160 mm) inflorescences in the recent material, is also clearly visible on the specimens of the type collection preserved in the Bolus Herbarium, at the University of Cape Town.

The species name, *longicornu*, is derived from the Latin, *longus* = long, *cornu* = a horn: referring to the relatively long floral spur, which is very obvious when looking at the flowers.

A striking feature of *H. longicornu* is the network of whitish veins that contrast prominently against the darker green leaf surface. Other species of *Holothrix* (*H. villosa*, *H. condensata*

[*H. villosa* var. *condensata*], *H. cernua*, *H. brevipetala* and *H. mundii*) occurring on the Peninsula have uniform green or grey-green leaves, lacking any conspicuous venation. The flowers of *H. longicornu* produce a highly fragrant nighttime scent. This, together with the nectar-filled spurs, is indicative of pollination by small moths.

In her revision of the genus *Holothrix*, Kathy Immelman (1996) noted that the shared possession of re-curved, coarse hairs on the leafless inflorescence stalk suggest a close relationship between *H. longicornu*, *H. cernua* and *H. brevipetala*. Both *H. brevipetala* and *H. longicornu* have short lip lobes, but the latter is unique in this species group, by the somewhat larger flowers possessing a straight elongate spur. Like many *Holothrix* species, *H. longicornu* is not fire-dependent and has been seen flowering annually on the Cape Peninsula, since its first sighting.

Although the sizeable gap in the distribution range (Port Elizabeth to the Cape Peninsula) may reflect a lack of botanical exploration, it is nonetheless remarkable that a rather insignificant little orchid such as *H. longicornu*, lost to science for some 70 years, should be discovered at such a distant location. *Holothrix longicornu*, like *Disa forficaria*, *D. salteri*, *D. ecalcarata*, *D. nubigena*, *Disperis macowanii*, *Pterygodium connivens* and *Acrolophia cochlearis*, is one of the few orchids occurring on the Cape Peninsula that were not seen by Harry Bolus by the time he died in 1911, when the second edition of *The Orchids of the Cape Peninsula* (1918) was being prepared. Noticeably, three of these orchid species were described by Joyce Lewis in *The Journal of South African Botany* between 1938 and 1948.

The recent illegal construction of an immense boundary fence on private land adjacent to the Table Mountain National Park has greatly disturbed the habitat and does not bode well for the ecology, and future conservation of other rare plants such as *Gladiolus jonquilliodorus*.

Acknowledgements

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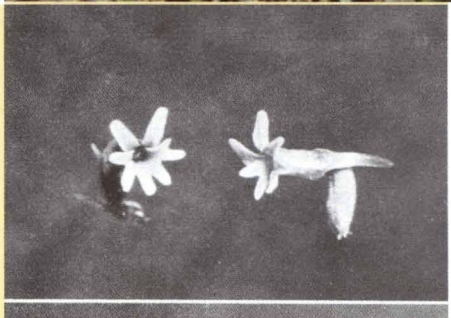

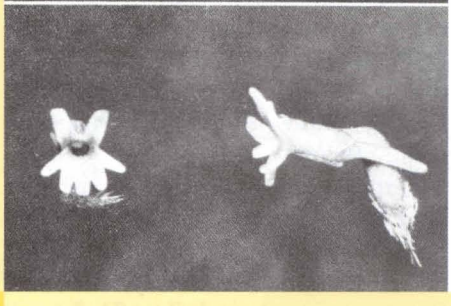

ABOVE RIGHT: *Holothrix longicornu* growing in its natural habitat on the southern Cape Peninsula. The species was previously only known from herbarium specimens collected at one locality at Port Elizabeth, 70 years ago. It was presumed extinct, as urban development has most likely replaced the natural environment in which it was first found. Photo: Helmuth Zelesny.

RIGHT: The flowers of this orchid from the Cape Peninsula are clearly identifiable when compared to photographs of the 'original' (type) specimen of *Holothrix longicornu* shown in G. J. Lewis' article, 'A new orchid' in the *Journal of South African Botany* **4**, 53 (1938).

Joyce Lewis

Dr Gwendoline Joyce Lewis (1909–1967) was a professional botanist who was also a talented botanical illustrator. She was born in Cape Town and educated at the University of Cape Town. She was for many years curator of the South African Museum Herbarium. Later, when that collection was transferred to Kirstenbosch in 1965, she became full-time botanical research officer there. She published extensively on the family Iridaceae in South Africa, on which group she was a world authority.

Adapted from the biographical sketch appearing in A Century of Cape Botanical Art *by John Rourke and Julie te Groen. See also the dedication to G. J. Lewis in* Journal of South African Botany *35 (1969) and Lewis et al. (1972) in 'further reading'.*

Further reading

Barker, W. F.; Lewis, G. J.; Levyns, M. R. and Moss, C. E. 1948. *Plantae Novae Africanae. Journal of South African Botany* **14**, 31-34.

Gunn, M. and Codd, L. E. 1981. *Botanical exploration of southern Africa.* Balkema, Cape Town.

Immelman, K. L. 1996. FSA contributions 6: Orchidaceae: *Holothrix. Bothalia* **26**, 125-140.

Lewis, G. J. 1938. A new orchid. *Journal of South African Botany* **4**, 53.

Lewis, G. J. 1941. *Plantae Novae Africanae. Journal of South African Botany* **7**, 78-80.

Lewis, G. J., A. A. Obermeyer and T. T. Barnard. 1972. A revision of the South African species of *Gladiolus. Journal of South African Botany*, Suppl. **10**, 1-316.

Linder, H. P. and Kurzweil, H. 1999. *Orchids of southern Africa*. Balkema, Rotterdam.