

PLANT PORTRAIT

1134. *Cynorkis sanguinolenta* Hermans, L.Gaut. & P.J.Cribb

Orchidaceae

Johan Hermans¹  | Laurent Gautier² | David Prehlsler³ |
Landy Rajaovelona⁴ | Phillip Cribb¹ | Margareta Pertl³ |
Andrew Brown¹

¹Herbarium, Royal Botanic Gardens, Kew,
Richmond, UK

²Conservatoire et Jardin botaniques de la Ville
de Genève and Université de Genève,
Laboratoire de botanique systématique et
biodiversité, Chambésy, Switzerland

³Core Facility, Botanical Garden, University
of Vienna, Vienna, Austria

⁴Kew Madagascar Conservation Centre,
Ivandry, Madagascar

Correspondence

Johan Hermans,
Email: j.hermans@kew.org

Summary

Cynorkis sanguinolenta Hermans, L.Gaut. & P.J.Cribb from Northern Madagascar was formally described in 2017. It is illustrated here and a full description, history, notes on cultivation and a conservation assessment are provided. It is compared with similar species from the region.

Cynorkis sanguinolenta (Plate 1134, Figures 1–4) was one of the first of several new large-flowered and attractive orchids recently found in northern Madagascar by teams from the Botanical Gardens of the University of Vienna, PBZT Antananarivo and the Conservatoire et Jardin botaniques, Genève (Hermans et al. 2017a–b, 2018a–b, 2019, 2020 a–d). The species was first recorded in January 2006 from the Daraina area in Antsiranana province by Louis Nusbaumer and Patrick Ranirison from Genève, and near Ambilobe by Riri Guittou et al. from Missouri. Specimens were identified at various times in herbaria as *Cynorkis fastigiata* Thouars, *C. guttata* Hermans & P.J.Cribb (now *C. angustipetala* Ridl.) and *C. lowiana* Rchb.f. It was not until 2011, when other colonies of plants were recorded and photographed by Zuzana Burivalova in Andrafiarana, that it was realised that this could be an unrecognised entity. This was confirmed by further collections in 2016 near Ambilobe by Anton Sieder from Vienna. The new species was finally described and illustrated in 2017 (Hermans et al. 2017a). The species is distinct by its large single leaf, tall secund raceme of up to 14 flowers, the proportionally very large white lip with a distinct carmine area towards the base, the deeply serrate anterior margins

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Curtis's Botanical Magazine* published by John Wiley & Sons Ltd on behalf of The Board of Trustees of the Royal Botanic Gardens, Kew.



FIGURE 1 *Cynorkis sanguinolenta*, plant in habitat, Photo Zuzana Burivalova.

of the lip and the somewhat sigmoid spur. It is allied to *Cynorkis fimbriata* H.Perrier ex Hermans, which has been found in the same area but whilst both have a typical deeply serrated lip there are considerable differences in both habit and flower: *C. fimbriata* has a 5 to 7 cm long leaf petiole, a linear lanceolate leaf, large leaf-like lower floral bracts (up to 20 mm long, 10 mm wide), bright purple flowers with the spur inflated in the apical third. *Cynorkis sanguinolenta* has a shorter 1–2 cm long leaf petiole, a larger oval-oblong leaf, consistently short amplexicaul floral bracts ($12 \times 2\text{--}3$ mm), larger flower segments, including the lip which is pure white with a carmine base and a slightly sigmoid spur. The species also resembles *Cynorkis angustipetala* Ridl. in habit, but its rachis is not so densely flowered, its flowers are larger in all their parts and its lip is more deeply serrate at the margins.

CULTIVATION. *Cynorkis sanguinolenta* grows particularly well in a free draining compost mix which can be achieved by adding larger amounts of pumice and gravel. Watering is probably the most critical factor and must be adjusted according to the needs of individual plants. It may differ considerably even between neighbouring pots in a collection, detailed observation is therefore key to success in growing these plants. At the beginning of the growth



PLATE 1134 *Cynorkis sanguinolenta*.

MARGARETA PERTL



FIGURE 2 *Cynorkis sanguinolenta*, detail of flower, Photo Zuzana Burivalova.

cycle, when the leaf tips appear, watering can start and should be slowly increased over the first few weeks. When in full growth plants need quite a lot of water (given that the soil is free draining) and enjoy a regular standard feed. At the end of the growing season, when the leaves turn yellow, watering should slowly be decreased and once the leaves drop the soil should be left to dry out quickly to prevent the tubers from rotting. Dormant tubers can be stored in the soil and should be checked regularly for rotting or shrivelling. Depending on the ambient air humidity it might be necessary to water them very slightly from time to time, but the potting mix should never be more than just a little moist. Once the growth tip appears they should be repotted (carefully, as the new roots are fragile and must not be damaged) and watering can be started again. Annual repotting is highly beneficial. According to the natural habitat this plant likes semi shady conditions and warm temperatures; high air humidity and good air movement are also important for a good development of the leaves and to prevent fungal problems.

NOMENCLATURE AND DESCRIPTION

Cynorkis sanguinolenta *Hermans, L.Gaut. & P.J.Cribb.* (in KB 72(3): 17). Type: Madagascar, Antsiranana prov., Andrafiomena, Anjahankely area, 7 Jan. 2011, 694 m, *Burivalova* ZB182 (holotype G00304151, isotypes K, MO, P, TEF).



FIGURE 3 *Cynorkis sanguinolenta*, flower, side view Photo Zuzana Burivalova.

Terrestrial or lithophytic *herb*, up to 35 cm tall including inflorescence, forming small clumps or groups of plants. *Tuberoids* 1 to 2, ovoid to cylindrical; roots fleshy, villous, apical. *Stem* short, partly underground, c. 1–2 cm long, with a solitary erect to arching radical leaf. *Leaf* glabrous, up to 18 × 12 mm but probably larger when mature, oval-oblong, obtuse apically, pale to mid-green, paler below, the central vein strongly keeled underneath, especially at the base. *Inflorescence* green, up to 32 cm long, peduncle 1.7–2.0 mm in diam., glabrous, produced from the new developing shoot, within the base of the unfurling leaf, with a peduncle sheath around the middle, c. 3 cm long; rachis secund to sub-racemose, up to 15 flowers but generally fewer; floral bracts ovate-lanceolate, 12 × 2–3 mm, green, sometimes a little hirsute on the exterior towards the apex, slightly auriculate at the base; pedicel and ovary almost straight, up to 55 × 2 mm, yellowish-green, with very few scattered hairs, mainly at the apex. *Flowers* variable in size with some substantially larger than others: overall 26–40 × 18–33 mm, not including the spur; sepals and petals purple, the exterior papillose; lip pure white or pale cream in some forms, with the entire disk a distinct carmine continuing into the throat and the spur green but becoming pinkish-purple; column dark purple with the rostellum white below; anthers darker. *Dorsal sepal* oblong, deeply concave and, together with the petals, forming a hood over the column, 7.5–9.7 × 3.4–4.1 mm, the base inflated; lateral sepals swept backwards against the ovary, concave, oblong to sickle-shaped, 9.1–9.6 × 4.1–4.2 mm. *Petals* narrowly oblong-obovate,

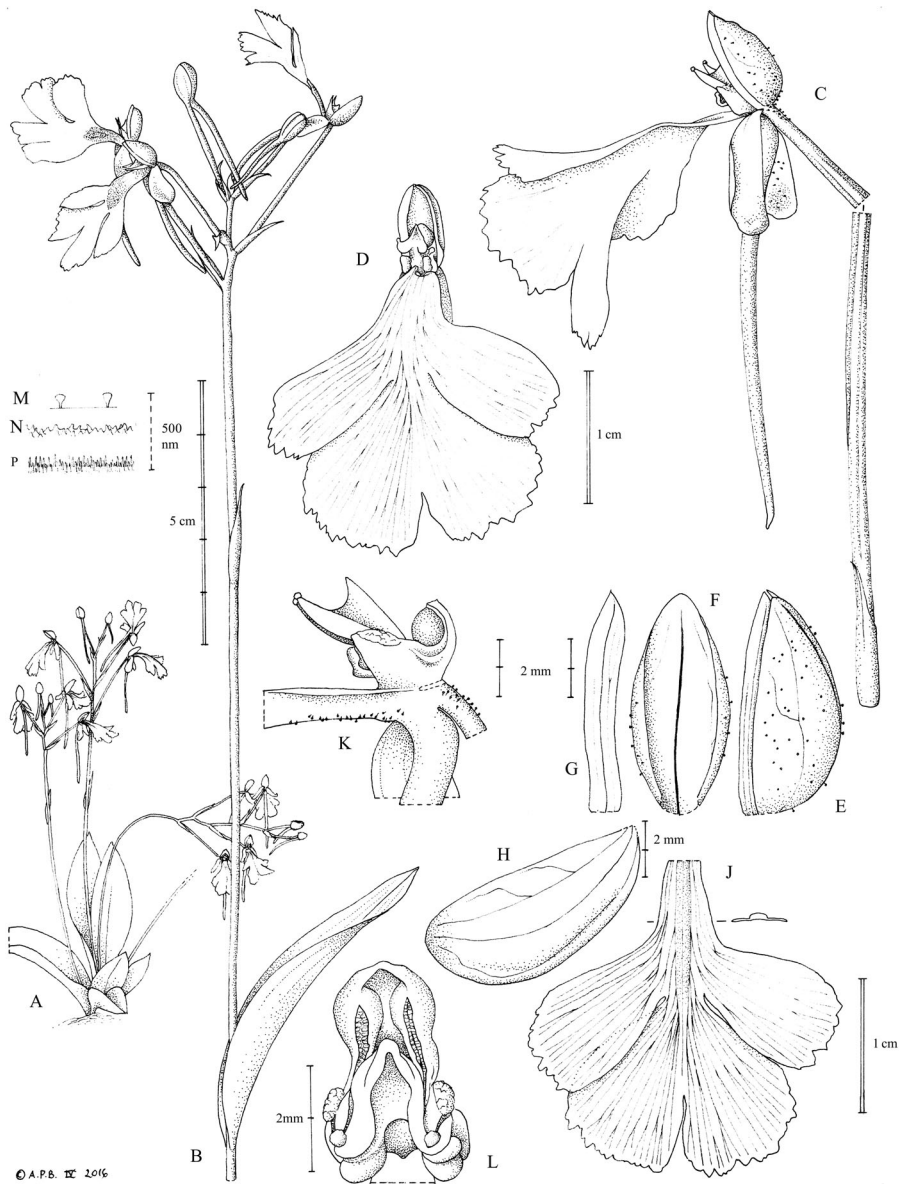


FIGURE 4 *Cynorkis sanguinolenta*. Line drawing by Andrew Brown from Kew Bulletin (Hermans 2017a: 38). A. habit (from photograph); B. habit; C. flower, lateral view; D. flower, face view; E. dorsal sepal and petals, lateral view; F. dorsal sepal, inner face; G. petal, inner face; H. lateral sepal, inner face; I. labellum; J. column, *in situ*, lateral view; K. column face view; L. glands from base of flowers; M. surface of inner face of sepal, lower edge; N. surface of labellum, proximal region. Drawing by Andrew Brown (material used *Sieder* 6987, spirit material, *Burivalova* 182 K000718773). Dashed bar = 500 nm, graduated single bar = 2 mm, double bar = 1 cm, graduated double bar = 5 cm.). approximate scale.

slightly curved apically, appressed to the inside of the dorsal sepal margins forming a narrow rim, $9.3\text{--}9.4 \times 1.3\text{--}1.9$ mm; *Lip* connate to the base of the column, lateral lobes a little smaller than the apical lobes, all deeply serrate around the anterior margins, with the disk slightly raised, overall $18\text{--}38 \times 15\text{--}27$ mm; spur almost parallel with the ovary, somewhat sigmoid, subulate towards the end, up to 32 mm long, av. 1.2 mm in diam. *Column* in an almost horizontal plane $5.9\text{--}6.1 \times 4.1\text{--}4.3$ mm, with two parallel

rostellum arms for almost half its length; mid-lobe forming a nose-like protrusion; staminodes club-shaped, hidden below the rostellum; anther loculi incurved; pollinia including the caudicle c. 5.5 mm long. Figure 4.

PHENOLOGY. Flowering in January in the wild and in cultivation.

DISTRIBUTION. Known from four localities in the DIANA and SAVA regions (Antsiranana province) of northern Madagascar.

HABITAT. Seasonally dry secondary grasslands on sandstone and white sands and erosion gullies in areas once dominated by semi-deciduous forest, rocky outcrops; between 90 and 500 m elevation.

CONSERVATION STATUS. This species was considered likely to be Endangered (EN), by Rajaovelona (Hermans et al. 2017a: 18). Recent observation (Jean-Michel Hervouet, April 2024) report extensive damage to habitats, roads and habitation in this area, caused by cyclone Gamane at the end of March 2024.

ETYMOLOGY. The name refers to the red blood-stained appearance of the flower.

ACKNOWLEDGEMENTS

We are most grateful to Margareta Pertl for the accompanying watercolour, to Andrew Brown for the line drawing, to Zuzana Burivalova for photographs and habitat information and to David Prehlsler for cultivating the plants used in the watercolour at the Botanical Garden of the University of Vienna.

ORCID

Johan Hermans  <https://orcid.org/0009-0007-9397-1736>

REFERENCES

- Hermans, J., Andriantiana J. L., Sieder A., Kiehn M., Cribb P., Rajaovelona L. & Gardiner L. (2017a). New species and nomenclatural changes in *Cynorkis* (Orchidaceae: Orchidoideae) from Madagascar and the Mascarenes. *Kew Bulletin* 72(3): 1–31. <https://doi.org/10.1007/s12225-017-9715-4>
- Hermans, C. & J. (2017b). Finding new *Cynorkis* in Madagascar. *Orchid Review* 125: 224–231.
- Hermans, J. (2018a). Zehn neue Ochideen von Madagascar. *Die Orchidee* 69: 68–70.
- Hermans, C. & J. & Hervouet C. & J.-M. (2018b). Retour à Madagascar: voyage vers le nord. *Orchidophile (Asnières)* 49: 11–22.
- Hermans, J. & Sieder, A. 2019). Mammoth found alive and thriving in Madagascar. *Orchid Review* 127: 163–165.
- Hermans, J. (2020a). *Cynorkis prehlsleri*. *Curtis's Botanical Magazine* 37(3): 376–384. <https://doi.org/10.1111/curt.12352>
- Hermans, J., Rajaovelona, L., Cribb, P. & Hervouet J.-M., Sieder A. & Andriantiana J. 2020b). New species and nomenclatural changes in *Cynorkis* (Orchidaceae) from Madagascar, the Comoros and the Mascarenes. *Kew Bulletin* 75: 50. <https://doi.org/10.1007/s12225-020-09904-5>
- Hermans, J. (2021a). *Cynorkis aconitiflora*. *Curtis's Botanical Magazine* 38(1): t.967. <https://doi.org/10.1111/curt.12369>.
- Hermans, J. Rajaovelona, L., Sieder. A. (2021b). *Cynorkis christae*. *Curtis's Botanical Magazine* 38(1): t.968. <https://doi.org/10.1111/curt.12370>
- Hermans, J. Rajaovelona, L., Sieder. A. (2021c). *Cynorkis elephantina*. *Curtis's Botanical Magazine* 38(1): t.969. <https://doi.org/10.1111/curt.12373>
- Hermans, J. Rajaovelona, L., Sieder. A. (2021d). *Cynorkis kiehnii*. *Curtis's Botanical Magazine* 38(1): t.970. <https://doi.org/10.1111/curt.12371>

How to cite this article: Hermans, J., Gautier, L., Prehlsler, D., Rajaovelona, L., Cribb, P., Pertl, M. et al. (2025) 1134. *Cynorkis sanguinolenta* Hermans, L.Gaut. & P.J.Cribb. *Curtis's Botanical Magazine*, 42(1), 45–52. Available from: <https://doi.org/10.1111/curt.12627>