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***Launaea thalassica* (Asteraceae, Lactuceae), a new species from the Cape Verde Islands, W Africa**

Abstract

Kilian, N., Brochmann, C. & Rustan, Ø. H.: *Launaea thalassica* (Asteraceae, Lactuceae), a new species from the Cape Verde Islands, W Africa. - Willdenowia 16: 491-496. 1987. ISSN 0511-9618.

Launaea thalassica from Brava, Cape Verde Islands is described as a species new to science; a distribution map and illustrations are also provided. The differences to the other *Launaea* species of the archipelago and possible relationships are shortly discussed.

Launaea Cass. is the largest genus of tribe *Lactuceae* (Asteraceae) in the Cape Verde Islands, W Africa. Of the five species, three are endemic to the archipelago. The non-endemics are *L. arborescens* (Batt.) Murb. (Syn.: *L. melanostigma* Petterson, cf. Brochmann & Rustan 1987) and *L. intybacea* (Jacq.) Beauverd. The spiny xerophyte *L. arborescens* occurs in the eastern and southern islands, while *L. intybacea* has a wide ecology and distribution. The reports of *L. nudicaulis* (L.) Hook. f. from the Cape Verde Islands (cf. Hansen & Sunding 1985) are due to confusion with *L. intybacea* (Kilian, in prep.).

The most common of the endemic species is *L. picridioides* (Webb) Robinson, which is a mesophyte occurring in the northern islands; an additional northern endemic will be treated by Kilian (in prep.). The third endemic species, the only one in the southern group of islands, is described here.

During field work in the island of Brava in 1982, two of the authors (CB & ØHR) discovered some homogeneous populations of *Launaea*, which were found to represent a new species. The species already had been collected by Lowe in 1864, the specimen was labelled "*Lactuca nudicaulis* (L.) [Murray] but seeds not beaked", and by Lobin in 1979, determined as *L. picridioides*. Research carried out in 1986 by one of us (NK) confirms this taxon to be new.

***Launaea thalassica* N. Kilian, Brochmann & Rustan, sp. nova - Fig. 1, 2.**

Typus: *Kilian 1200* (holotype: FR, isotypes: B, BM, COI, K, O).

Perennis, florens 25-60 cm alta, radice palavi valido, caudice lignescenti, ramificanti prope terram, rosulae terminales plures ferenti; surculus rosulae caulem synflorescentiae 1.5-3.5 mm crassum, ascendente ad erectum, nudum propullans. Folia rosulata, anguste obovata, obtusiuscula, 5-16 cm longa, 1-3 cm lata, basim versus ad pauca mm angustata, sessilia, indivisa sed ± irregulariter sinuato-dentata, margine cartilagineo-spinuloso-denticulato, vix vel non undulato; lamina ± sub

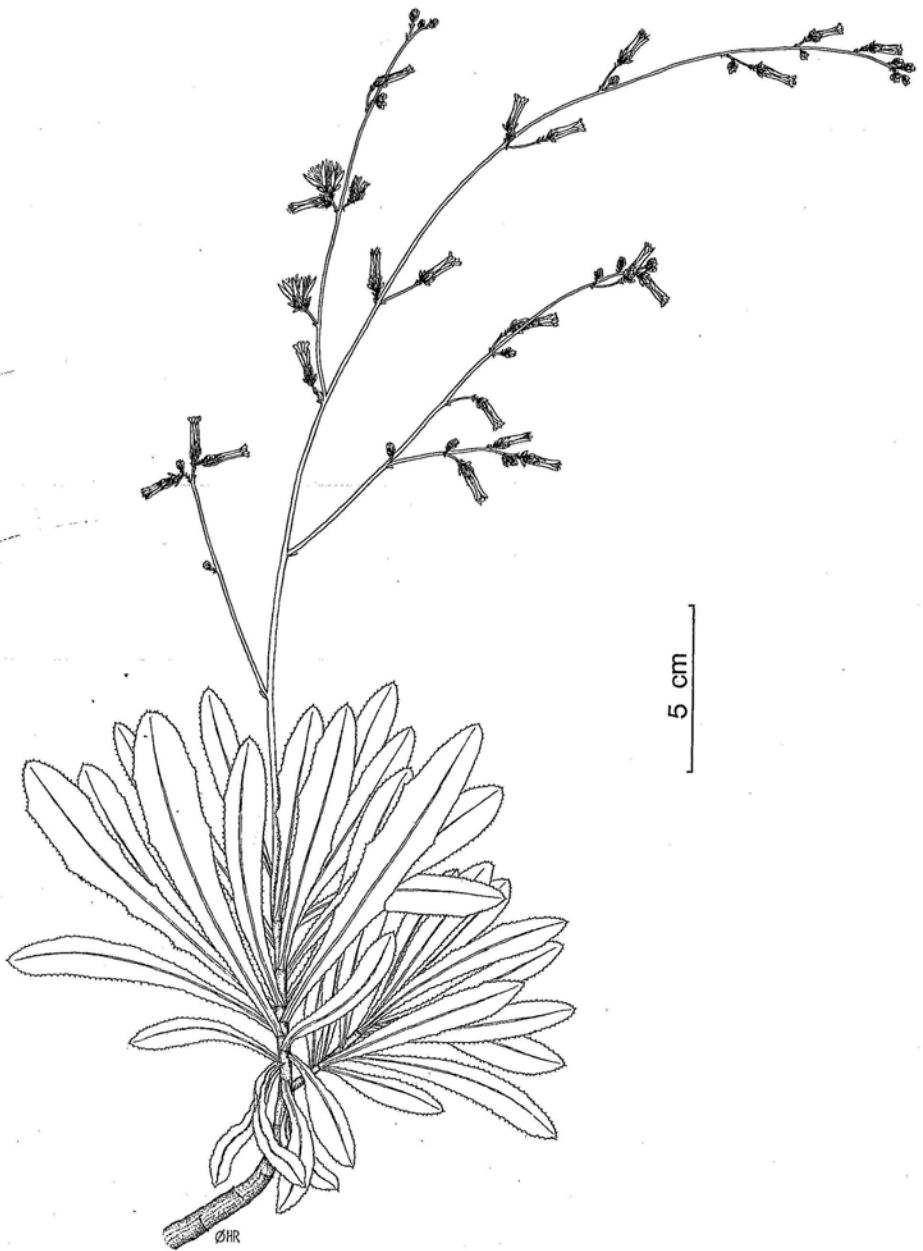


Fig. 1. *Launaea thalassica* N. Kilian, Brochmann & Rustan. - Drawn after herbarium specimens by Ø. H. Rustan.

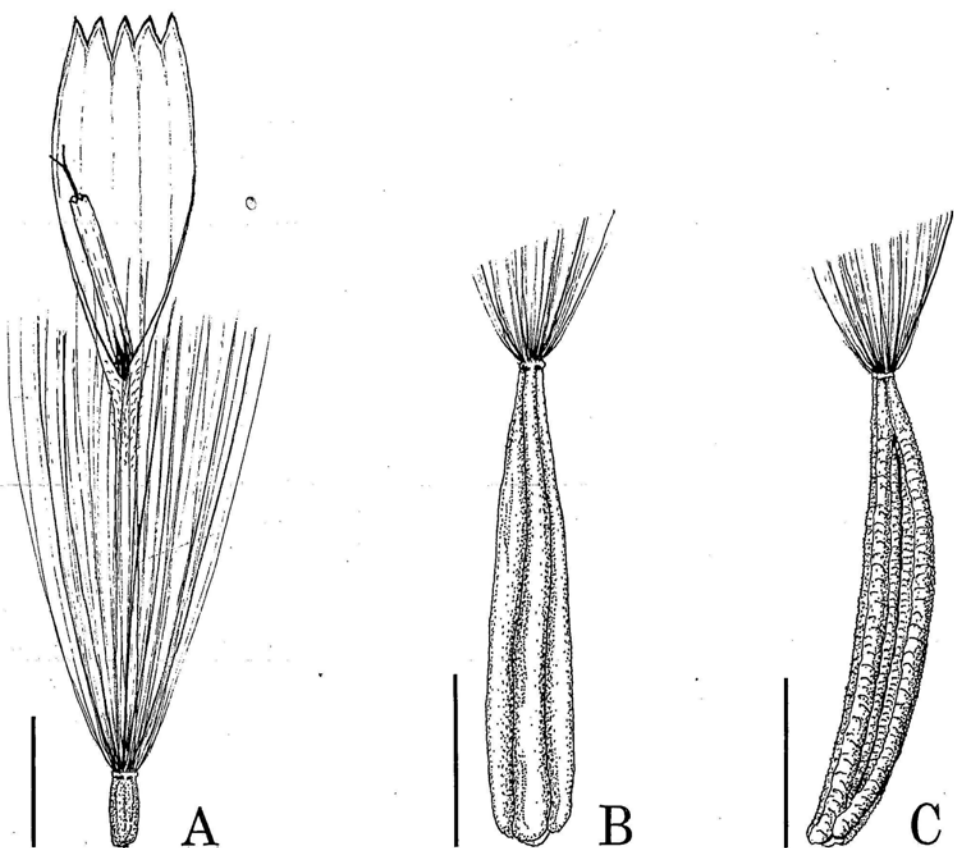


Fig. 2. Floret and achenes of *Launaea thalassica* N. Kilian, Brochmann & Rustan. A: Floret; B: central achene; C: marginal achene, $\frac{3}{4}$ ventral view, all from *Kilian 1200*; scale 2 mm. - Drawn by N. Kilian.

coriacea, supra subglauco-viridis, subtus griseo-viridis. Bractee squamiformes, \pm triangulares, acutae vel acuminatae, \pm scarioso-marginatae, leviter denticulatae. Synflorescentia in parte inferiore capitulis ad nodos caulis vel ad ramos monochasiales laterales (pro maxima parte breves) solitariis vel paucifasciculatis dispositis; in parte superiore capitulis ad ramos monochasiales usque ad circa 35 cm longos, subsimplices, deflexos pariter dispositis; ramus ultimus caulem synflorescentiae capitulo terminatum prolongatus. Pedunculi 1-15 (25) mm longi, filiformes, erecto-patentes, squamulas paucas in phylla involucria transeuntes ferentes. Capitula 6-11-flora; receptaculum nudum, fructiferum 1.3-2.0 mm in diametro. Involucrium 11.0-13.5 mm longum, ante anthesim anguste cylindricum, postea conicum, ad maturitatem achaeniorum \pm stellato-patens; phylla involucria exteriora 8-10, imbricata, latiuscule scarioso-marginata, acuta; extima 1.5-2.0 mm longa, ovata; sequentia gradatim longiora, ovato-lanceolata usque lanceolata; intima triplo usque duplo breviora quam phylla interiora; phylla involucria interiora 5, uniseriata, anguste lanceolata usque \pm linearia, tenuiter

scarioso-marginata, 10–12 mm longa, 1.5–3.0 mm lata, \pm aequalia; omnia phylla ad apicem subciliata; costa mediana phyllorum – imprimis interiorum – in parte inferiore demum duro-incrassata. Flosculi ligula pallide flava, venis ochraceis usque violaceis, 5.0–6.0 mm longa, 1.4–1.8 mm lata, subobovato-lanceolata, apice 5-dentata, tubo 5.5–6.5 mm longo, in parte superiore breviter pubescenti; tubus antherarum 1.9–2.3 mm longus (incl. appendices apicales circa 0.3 mm longas), appendicibus basali-bus 0.5–0.6 mm longis. Achaenia 5.0–6.0 mm longa, 0.7–1.0 mm lata, \pm papillata, heteromorpha: centralia \pm columnaria, indistincte vel distincte tetragonia, 4-costata (costae divisae per strias longitudinales), albida usque cineraria; marginalia subcurvata, subcompressa, apicem versus plus quam basim versus angustata, 5-costata et costae ipsae inaequaliter \pm sub-3-costatae, transversaliter dense rugosa, cinereo-fusca. Pappus 6.0–7.0 mm longus, persistens, albus, radiis numerosis tenerrimis flexibilibus et radiis paucioribus crassioribus, ambabus denticulatis compositus.

Perennial, flowering ca. 25–60 cm high, with strong tap-root and caudex becoming woody, branching near the ground, carrying a few terminal leaf rosettes. Rosette sprout shooting forth an ascending to erect, leafless synflorescence stem, 1.5–3.5 mm thick. Leaves narrow spatulate with somewhat rounded tip, 5–16 x 1–3 cm, attenuate to a few mm at base, sessile, undivided, margin irregularly sinuate-dentate, cartilaginous, spinose-denticulate, scarcely undulate or not; lamina of somewhat leathery consistence, upper surface dull green, somewhat glaucous, lower surface greyish green. Bracts scale-like, \pm triangular, acute to acuminate, with scarios margin, scarcely denticulate. Synflorescence in lower part with capitula single or clustered in small groups at the nodes of the stem or on (mostly short) monochasial branches; in upper part capitula situated in similar manner on branches up to 35 cm long, which are almost unbranched and bend downwards; stem prolonged into the uppermost branch ending in a single capitulum. Pedunculi 1–15 (25) mm long, wiry, erect to spreading, with a few scales passing into the involucre bracts. Capitula with 6–11 florets. Receptacle naked, at fruiting time 1.3–2 mm in diameter; involucre 11–13.5 mm long, before anthesis narrow cylindrical, later conical, at maturity of achenes star-wise outspread; outer involucre bracts 8–10, imbricate, with fairly broad scarios margin, acute; the outermost 1.5–2 mm long, ovate; the following gradually longer, ovate-lanceolate to lanceolate; the innermost three to two times shorter than the inner involucre bracts; inner involucre bracts 5, in one series, narrow lanceolate to \pm linear, with narrow scarios margin, 10–12 x 1.5–3 mm, \pm equal; all involucre bracts at tip scarcely ciliate; midrib – especially of the inner ones – in lower part thickened and hard. Florets with pale yellow ligule, 5–6 x 1.4–1.8 mm, somewhat obovate-lanceolate, at apex with 5 teeth; veins dull yellow to violet, tube 5.5–6.5 mm long, in the upper part shortly pubescent; anther tube 1.9–2.3 mm long (incl. apical appendages ca. 0.3 mm long), basal appendages 0.5–0.6 mm long. Achenes 5–6 x 0.7–1 mm, \pm papillate, heteromorphic: central \pm columnar, indistinctly or distinctly square, 4-ribbed (ribs distinct by longitudinal fine grooves), whitish to ash-greyish; marginal somewhat curved, somewhat compressed, more attenuate towards apex than towards base, 5-ribbed and each rib itself unequally \pm 3-ribbed, densely transversely wrinkled, greyish brown. Pappus 6–7 mm long, persistent, white, consisting of numerous very thin, flexible rays and a smaller number of thicker rays, both ray types finely denticulate.

Specimens seen:

Cape Verde Islands: Brava: Ribeira da Agua, oberhalb Lavadura, am Abstieg von N.S. do Monte, 350 m, 24° 43' 40" W, 14° 51' 40" N, 22. 1. 1986, *Kilian 1200* (B, BM, COI, FR, O); an der Straße von Porto da Fajã nach Cova Rodela, oberhalb Achada do Figueiral de Baixo, ca. 400 m, 24° 43' 30" W, 14° 52' 00"–30" N, 22. 1. 1986, *Kilian 1200a* (herb. Kilian); Sorno, Ribeira do Carviçal, 50 m, 24° 43'–44' W, 14° 53'–54' N, 26. 2. 1982, *Rustan & Brochmann ØHR 2569, 2570, 2571*(O); *ibid.*, 27. 10. 1984, *de Matos 5809* (LISC); S of Vila de N. Cintra, close to Ribeira do Serrado and Ribeira Tina, 640 m,

24° 42'–43' W, 14° 51'–52' N, 21. 2. 1982, *Rustan & Brochmann ØHR 2422* (O); rocks in a gorge above Povoação de S. João B. a., [24° 42'–43' W, 14° 51'–52' N], 28. 3. 1864, *Lowe* (K); an der Straße zwischen Vila N. Cintra und dem Hafen, [24° 41'–42' W, 14° 52'–53' N], 27. 10. 1979, *Lobin 1176* (herb. Lobin); upper part of Ribeira Fundo do Cachaço, 500 m, 24° 41'–42' W, 14° 50'–51' N, 25. 2. 1982, *Rustan & Brochmann ØHR 2560* (O).

The material is relatively homogenous. Morphological variation mainly concerns the size of the plants, the size of the leaves and the frequency of branching of the synflorescence. The variation between the material of different localities in Brava has not been seen to exceed the variation inherent to the populations dealt with in the samples *ØHR 2569–2571* and *Kilian 1200*.

L. thalassica is most easily distinguished from *L. intybacea* and *L. picridioides* by the few-flowered capitula with only 5 inner involucre bracts (versus 8), from *L. intybacea* furthermore by its longer and non-beaked achenes. *L. arborescens* as a spiny shrub is entirely different.

It is not easy to place *L. thalassica* into one of the subgenera; since a revision of the genus is still outstanding, a classification has to be rather tentative. Probably the new taxon must be referred to *Launaea* subgenus *Brachyrhamphus* (DC.) O. Hoffm., to which the widespread *L. intybacea* also belongs. Within this subgenus it might have some relationships to *L. taraxacifolia* (Willd.) Amin ex Jeffrey, which nevertheless is clearly distinct, e. g. in fruit characters.

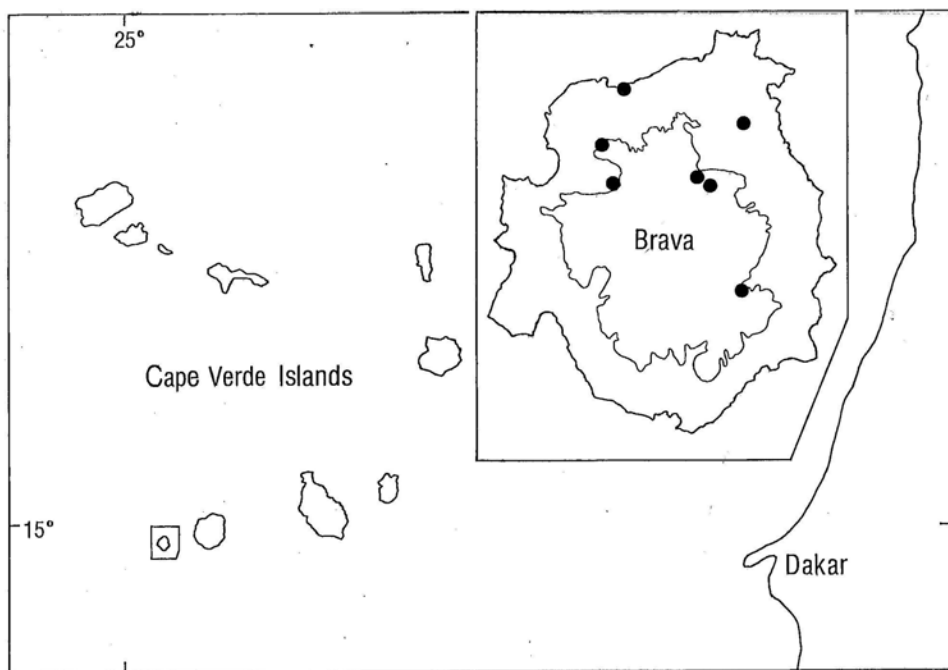


Fig. 3. Distribution of *Launaea thalassica* N. Kilian, Brochmann & Rustan on Brava, Cape Verde Islands, W Africa. - Contour interval 500 m.

The distribution of *L. thalassica* is given in Fig. 3. The species occurs mainly on the north- to northeastern slopes of the island. It is confined to semiarid to humid areas exposed to the trade wind, and belongs to the southern mesophytic element of the archipelago (cf. Brochmann & Rustan 1986). It is locally abundant at altitudes between 50 and 640 m, growing in gravelly to rocky slopes and in cliffs, often in steep edges of ribeiras. It is also found along irrigation canals and as a weed in cultivated areas. Frequently associated species are *Centaurea melitensis* L., *Forsskaolea procrisifolia* Webb, *Helianthemum gorgoneum* Webb, *Launaea intybacea* and *Tornabenea* sp.

Acknowledgements

One of the authors (NK) wishes to express his thanks to Priv. Doz. Dr. H. W. Lack for suggesting to him the highly interesting *Lactuceae* of the Cape Verde Islands as subject for his Diplomarbeit, and especially for the valuable discussions by which he accompanies this work; furthermore to Prof. Dr. W. Greuter, for the very generous way he provided working facilities to carry out this study.

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