

A SURVEY OF THE *RUBUS* SPECIES (*ROSACEAE*) DESCRIBED FROM THE CANARY ISLANDS

by

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Resumen

MATZKE-HAJEK, G. & H.E. WEBER (1999). Reconocimiento del género *Rubus* (Rosaceae) en las Islas Canarias. *Anales Jard. Bot. Madrid* 57(1): 25-35 (en inglés).

Se han estudiado la taxonomía, la nomenclatura y la distribución de las especies de zarzas (*Rubus* L., subgen. *Rubus*) descritas de las Islas Canarias. Junto a *Rubus ulmifolius* Schott, especie muy frecuente en el Mediterráneo, se encontraron dos especies: *R. bollei* Focke (Syn.: *R. canariensis* Focke, *R. suspiciosus* Menezes) y *R. palmensis* A. Hansen. Se incluyen descripciones completas e ilustraciones de algunas características relevantes y que no siempre se han observado en especímenes de herbario revisados. Además, se discuten problemas de tipificación y se describe como nuevo para la ciencia *Rubus* × *wolfredoi-wildpretii* H.E. Weber nothospec. nov., híbrido frecuente entre *R. bollei* y *R. ulmifolius*. *R. bornmuelleri* Focke de Gran Canaria debe ser excluido de la lista de las especies canarias, al estar basada su descripción en un *specimen dubium*.

Palabras clave: Macaronesia, distribución, taxonomía, tipificación, zarzas.

Abstract

MATZKE-HAJEK, G. & H.E. WEBER. (1999). A survey of the *Rubus* species (Rosaceae) described from the Canary Islands. *Anales Jard. Bot. Madrid* 57(1): 25-35.

Taxonomy, nomenclature and distribution of the bramble species (*Rubus* L., subgen. *Rubus*) described from the Canary Islands are studied. Apart from the widespread Mediterranean *R. ulmifolius* Schott two species occur: *R. bollei* Focke (Syn.: *R. canariensis* Focke, *R. suspiciosus* Menezes) and *R. palmensis* A. Hansen. The latter is not an endemic of La Palma as assumed by its discoverer, but is recorded for the first time also in Gran Canaria and Tenerife. Complete descriptions are provided, and illustrations of distinctive features often lacking in herbarium specimens are presented. Problems concerning the typification are discussed. *Rubus* × *wolfredoi-wildpretii* H. E. Weber nothospec. nov., the frequent hybrid between *Rubus bollei* and *R. ulmifolius* is described as new to science. *Rubus bornmuelleri* Focke from Gran Canaria is based on a specimen dubium and has to be deleted from the list of Canarian species.

Key words: Macaronesia, bramble, distribution, taxonomy, typification.

INTRODUCTION

Since Focke in 1887 for the first time focused attention on the "*Rubi der Canaren*" only a few attempts have been made to elucidate the taxonomy of the Canarian

bramble-flora (FOCKE, 1892, 1914; HANSEN, 1972). However, the descriptions, original diagnoses as well as complementary notes, are insufficient for the following reasons: 1) Focke, the author of three names in question (*Rubus bollei*, *R. canariensis*,

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R. bornmuelleri), had never seen the living plants of the Canarian brambles he described. When he published *R. bollei* for example, he did not even base his findings on any herbarium specimens at all. 2) Many herbarium specimens, including type material, lack characteristic components like stem cuttings, representative leaves from light exposed shoots or typical inflorescences. Collectors were often unable to supply those parts due to the strong ramification or the tall growth of the plants. Others did not know about the requirements for sufficient and instructive herbarium material of *Rubus*. All this created obscurity and confusion, which were passed on to modern checklists and floras (HANSEN & SUNDING, 1985; KUNKEL, 1991; HOHENESTER & WELSS, 1993).

The intention of this contribution is thus:

- 1) to typify the names *Rubus bollei* Focke and *R. canariensis* Focke;
- 2) to examine critically the systematic value and status of the *Rubus* taxa described from or quoted for the Canary Islands (*R. bollei* Focke, *R. bornmuelleri* Focke, *R. canariensis* Focke, *R. palmensis* A. Hansen, *R. suspiciosus* Menezes);
- 3) to complete and rectify insufficient descriptions and to provide illustrations of distinctive characters which are often lacking in herbarium specimens.

The Mediterranean *Rubus ulmifolius* Schott, common and widespread also in the Canary islands is not discussed here. It has already been treated in detail by MONASTERIO-HUELIN & WEBER (1996).

MATERIAL

The study is based on field observations and collections by the authors on the western Canary Islands in 1969 and from 1995 to 1998. Morphological investigations on herbarium specimens have also been carried out on material from B, BM, BREM, C, COI, JE, K, P, TFC and private herbaria. Further institutions have been checked in vain in the search for brambles collected by Bolle.

DESCRIPTIONS

Rubus bollei Focke, Abh. Naturwiss. Vereine Bremen 9: 405 (1887, "1886")

Syn.: *R. ulmifolius* ssp. *bollei* (Focke) Bornmüller, Bot. Jahrb. Syst. 33: 434 (1903)

Loc. typ. indic.: "In regione laurorum Palmae insulae observavit cl. Dr. E. Bolle..."

Neotypus: La Palma (Canaren). June 1892, R.P. Murray No. 21. (JE!, Focke-collection, selected here)

Syn.: *Rubus canariensis* Focke, Abh. Naturwiss. Vereine Bremen 9: 405 (1887, "1886")

Loc. typ. indic.: "Crescit in silvis Teneriffae insulae in vicinitate oppidi Orotava." Bourgeau Pl. Canar. no. 755

Lectotypus: Teneriffa – In margine silva vulgaris, E. Bourgeau, die 15. Maii 1845. E. Bourgeau, Plantae Canarienses. No. 755. as "*R. fruticosus* Linn." (P!, lectotype, selected here)

Syn.: *Rubus suspiciosus* Menezes, Jorn. Sci. Math. Phys. Nat. ser. 2. 7(28): 313 (1910, "1909") pro hybr. *R. bollei* × *R. ulmifolius*

Typus. [Madeira:] Caminho do Arrebentao [em frente da fonte da Telha.] C.A. Menezes 8.1909 (COI!, holotype)

Description

Stem high-arching up to 3 m or climbing up to 8 m, 10-25 mm diameter, strongly branched, angled with flat or slightly furrowed sides, dark purple, glabrous or glabrescent with sparse simple hairs, prickles 6-15 per 5 cm, on the angles, subequal, with very broad triangular red base, declining (straight or) slightly curved, 4-8 mm.

Leaves (fig. 1a-e) digitate, leaflets 5, becoming leathery, dark green, glabrous and shining above, grey or greyish-white-felted beneath with contrasting light-brown nerves; terminal leaflet 8-12 × 5-9 cm (in moist, moderately shady sites rich in nutrient even up to 15 × 12 cm), broadly ovate or obovate to nearly round with an acuminate(-cuspidate) apex 8-22 mm and an entire or emarginate to sometimes cordate base, more or less evenly

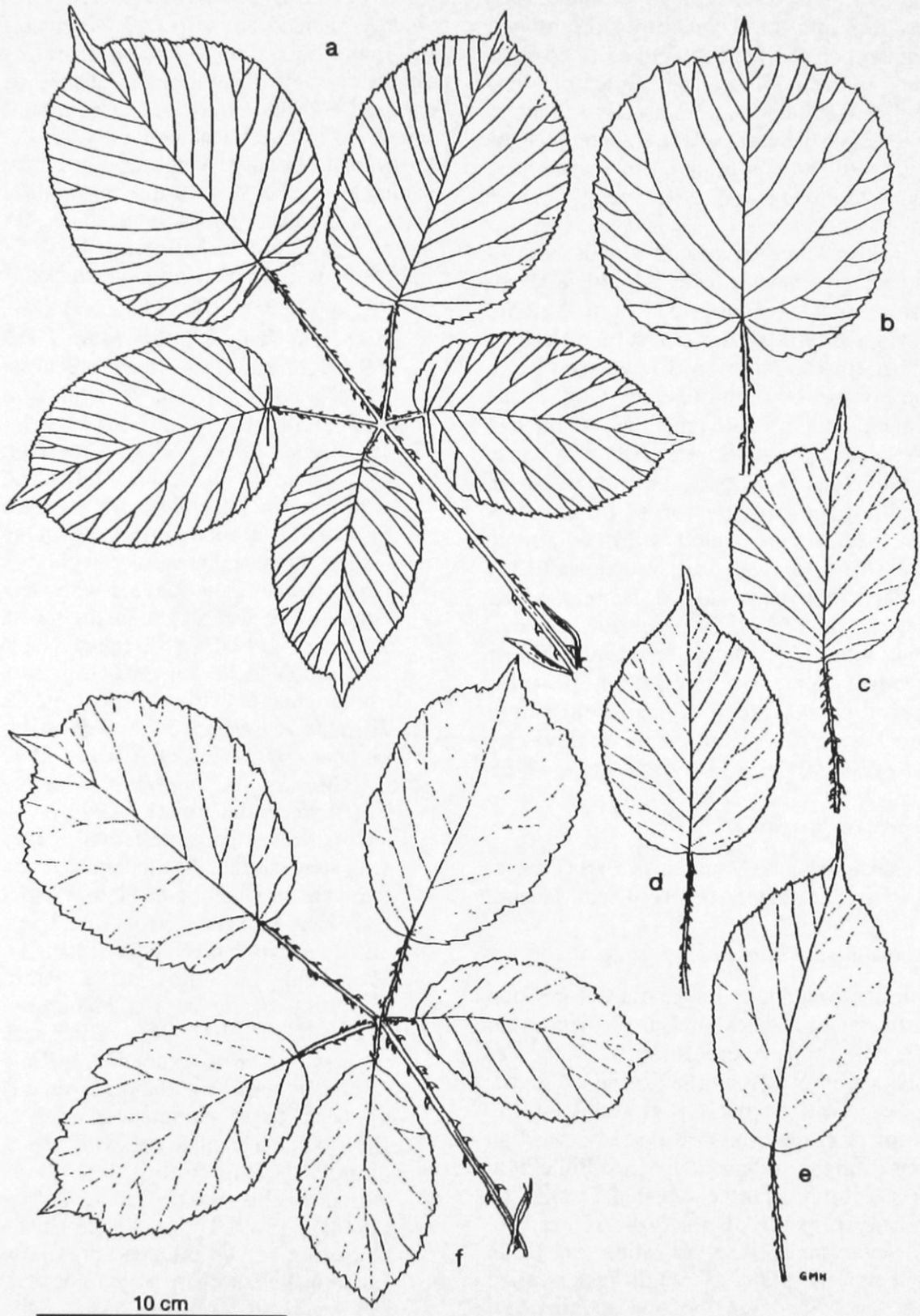


Fig. 1.—*Rubus bollei*: a, typical leaf; b-e, variability of terminal leaflet. *R. x wolffredoi-wildpretii*: f, leaf.

serrate with teeth-tips straight or introrse and the principle teeth sometimes prominent, slightly convex, the petiolule 35 to 55 % as long as the laminula; petiolules of basal leaflets 4-18 mm; petioles usually as long as or longer than basal leaflets, coloured like the stem with scattered simple and stellate hairs and 8-25 broad-based, often strongly curved prickles 3-5 mm.

Inflorescence large with a wide base of spreading peduncles, with 3-5-foliolate leaves below and sometimes 1-2 simple ovate leaves, the cylindrical or conical apex leafless down to about 15 to 30 cm, but with conspicuous bracts up to 3 cm long; rachis straight with sparse to numerous simple and tufted hairs, grey-felted above and with sparse to numerous (4-12 per 5 cm) broad-based, declining and slightly curved prickles 3-6 mm; pedicels grey-felted, with few simple patent hairs and a very variable number (0-15) of slender curved prickles c. 1-2 mm; sepals greyish white-felted, short-pointed, reflexed; petals up to 16 × 10 mm, broad-ovate, white or rarely pale pink; filaments white, exceeding the green styles; anthers and carpels glabrous; receptacle hairy; flowering in (V)VI(VII). $2n = 14$ (GUSTAFSSON, 1943).

General distribution

Canary Islands (Gran Canaria, La Gomera, El Hierro, La Palma, Tenerife) and Madeira.

Typification of *Rubus bollei*

In the protologue Focke did not mention particular exsiccates, and in his herbarium (JE, BREM) no specimen of *R. bollei* collected in or before 1887 could be found. Focke even explicitly stated that his fragmentary description was solely based on "observations" submitted by C.A. Bolle. If at all a lectotype can be selected, it must be chosen from the plants Bolle referred to. However, there is no indication that Bolle collected the plant, although Focke called him the "discoverer" of the species. All institutions which according to TL and IH deposit parts of Bolle's herbarium (B, FI, K, MO, P-CO, S, W) were checked in vain.

In any case the current concept of *R. bollei* is hardly founded on the poor and deficient protologue but rather on complementary descriptions and illustrations published by Focke in 1892 and 1914 respectively, after he studied *Rubus* specimens collected by R.P. Murray on the Canary Islands. Consequently, a neotype is selected from this material, of which six specimens could be traced (JE, B). They are labelled as follows (Murray's handwriting is given here in square brackets).

- 1) JE: *Rubus bollei* Focke. Palma (Canaren). Juni 1892 R.P. Murray. [La Palma. June 92. 21.] – Two panicles of 40 cm length and two leaves with stem-cuttings, partitioned on two sheets.
- 2) JE: *Rubus bollei* Focke. Teneriffa: roadside near Villa Orotava. July 1892. R.P. Murray. [*R. canariensis* roadside near Ville Orotava July/92.] – One leafless broad inflorescence with very dense prickles and one leaf with stem cutting. This leaf served as the model for plate 3 in FOCKE (1892) and for the illustration in FOCKE (1914), p. 340. The original drawing still exists in JE.
- 3) JE: *Rubus bollei* Focke. Teneriffa: Guimar (Barranco del Ap) Juli 1892 R.P. Murray. [*R. canariensis*. Guimar. T. (Barranco del Ague). VII/92.24.] – Two sheets: two rather small leaves with stem cuttings 6 mm diameter, and one panicle which is cut into a short, leafy basal part and a 30 cm apical part.
- 4) JE, B: *Rubus bollei* Focke Teneriffa: Metangar. 30 Juni 1892 Rich. P. Murray. [*R. canariensis*. Matanzas – T. 30.VI/92. RPM. 26] – JE: Three sheets: two inflorescences, 40 and 50 cm; the leafy base of inflorescence II has been cut off and mounted on sheet III; two rather small leaves, only one of them with stem cutting. Infl. I was shown in the illustration in FOCKE (1914), p. 339. The duplicate (in B) consisting of two inflorescences. The leaves on this sheet are not stem-leaves, but were cut from the base of the inflorescence. This specimen was given into the B-Herbarium via Bornmüller, who received it from Focke.

- 5) JE: *Rubus bollei* Focke. Teneriffa: Anapa Hills. Juni 1892 R.P. Murray. [R. Bollei. Anaga Hills T. June /92. no barren seen. From same station as those I sent in 1890.] – One inflorescence 45 cm.

All the material cited above is well preserved and belongs to the same taxon. Specimens (3) and (5) are less instructive because they lack fully developed leaves. Parts of specimens (2) and (4) were used by Focke to illustrate the taxon; their remaining parts, however, are rather untypical and both came from Tenerife, an island not quoted in the original description. Therefore specimen (1) has been selected as neotype. It is more complete and its provenance corresponds best to the locality mentioned in the protologue. This designation keeps up the current use of the name *Rubus bollei*.

Typification of *Rubus canariensis*

Analogous to *R. bollei* the interpretation of *R. canariensis* among taxonomists was dominated by Focke's later publications (1892, 1914) rather than by the original diagnosis. Focke's description and illustrations – the latter based also on a specimen collected by R.P. Murray (22. Bco. del Rio near S. Cruz de la Palma, Juni 1892, *R. P. Murray*) – seem to show specific differences of *R. canariensis* from *R. bollei*: more evenly serrated, narrower terminal leaflets with a less fine apex, and curved prickles on the inflorescence. As a matter of fact, these characters are due to the morphological variability of *R. bollei* and are not considered here as taxonomically relevant features. This point of view, as a result of actual observations is also in full conformity with the lectotype: Unlike in *R. bollei*, Focke referred to particular herbarium exsiccates in the protologue, namely Bourgeous Planta Canariensis No 755. The whereabouts of the specimen(s) Focke might have seen, could not be traced. The locality given by Focke is more detailed (“... in vicinitate Oppidi Orotava”) than on the lectotype label. Since there is no indication that the syntype is heterogenous,

the specimen in Bourgeous own collection (P) was chosen as lectotype. It is well preserved and consists of a leaf (probably cut from a branch instead of the main barren stem) and a broad, leafy inflorescence. Especially the latter shows the typical features of *R. bollei*, whereas the leaf lacks the stem cutting and is therefore less instructive.

Taxonomy

Since FOCKE (1914) *Rubus bollei* has been placed in the series *Rhamnifolii* (Bab.) Focke of Sectio *Rubus* and belongs to the few diploid European “primary species” within the genus *Rubus* L. (GUSTAFSSON, 1943). Unlike apomictic bramble species, *R. bollei* has less constant characters due to normal sexual recombination. There is, for example, a rather broad variability in leaf size and -serration (cf. fig. 1a-e), hairyness of leaves and stems, and length of prickles. Just as other diploid bramble species *R. bollei* may interbreed with other species of Subgenus *Rubus* and give rise to hybrids. The most widespread hybrid (*R. bollei* × *ulmifolius*), according to the frequency of the other parental species (*Rubus ulmifolius*), is described on page 33.

In this context it is worth noting that Focke mentioned two characters in the protologue of *R. bollei* which are rather unusual in this species: “rachis cum pedunculis puberula aculeis rectis parvulis sparsis armata” and “petala... rosea”. These deficiencies of the description may result from the fact that Bolle was not experienced in observing *Rubus* and possibly confused vegetative characters unique to *R. bollei* with inflorescence-features more typical of the frequent *R. ulmifolius* Schott and hybridogenous plants.

Additional specimens examined

ESP. GRAN CANARIA: Tamadaba, 1000 m. 16-VII-1993, M.S. Pascual, TFC 37.122. Bco. del Cernícalo, primavera de 1989, S.O. González & E.F. Bonafonte, TFC 32.032. LA GOMERA: An der Forstpiste zw. Meriga und Acevinos, ca. 1,2 km SW La Cerpa, 25-III-1995, Matzke-Hajek, MATZKE-HAJEK. EL HIERRO: Fuente de Tuico, 850 m. Lorbeerwald zw. Jináma und Frontera, 25-VIII-1994, I. & P. Schönfelder 94-239, WEBER. LA PALMA: Südl. Tijarafe, wo die Hauptstrasse den Bco. del

Jurado quert, 16-III-1996, *Matzke-Hajek*, MATZKE-HAJEK. Bco. del Jurado südöstl. Tijarafe, unter der Straße Los Llanos-Puntagorda, 600 m, 28-III-1998, *Matzke-Hajek*, MATZKE-HAJEK. Ob. Gallegos, nach dem 2. Tunnel von Barlovento, Lorbeerwald, 800 m, UTM Spalte 23/Zeile 89, 2-X-1993, *I. & P. Schönfelder* 93-116, WEBER. Ob. Gallegos, nach dem 3. Tunnel, UTM Spalte 24/Zeile 90, 2-X-1993, *I. & P. Schönfelder* 93-117, WEBER. Straßenrand nördl. Barlovento, 8-VI-1993, *Norbert Meyer*, MEYER. Monte de los Tilos, pista forestal que lleva al Bco. del Agua, sub *R. ulmifolius*, 3-I-1973, *W. W., E. B. T.*, TFC 16.924. Bco. del Agua, Forstweg 0,5 km östl. Eingang zur Schlucht, 7-VI-1993, *Norbert Meyer*, MEYER. Bco. del Agua SW Los Sauces, Eingang, Fußweg in die Schlucht, 7-VI-1993, *Norbert Meyer*, MEYER. Ob. des Bco. del Agua SW Los Sauces, Forstweg bei Espigón Atravesado, 20-III-1996, *Matzke-Hajek*, MATZKE-HAJEK. Bco. del Rio near S. Cruz de la Palma, VI-1892, *Murray*, JE-FOCKE. Bco. del Juan Major, bei Cubilas, 2,5 km WSW St. Cruz, 370 m ü NN, 31-III-1998, *Matzke-Hajek*, MATZKE-HAJEK. Cumbre nueva, Ostseite, 300 m südl. des Tunnels, 18-III-1996, *Matzke-Hajek*, MATZKE-HAJEK. Cumbre nueva, Ostseite, Forstweg Los Lomos, 24-III-1996, *Matzke-Hajek*, MATZKE-HAJEK. Cumbre Nueva, Südostseite, neben der Strasse zw. San Isidro und Refugio El Pilar, 3 km SW S. Isidro, 1000 m, 31-III-1998, *Matzke-Hajek*, MATZKE-HAJEK. TENERIFE: Cabezo del Tejo, 915-820 m, Lorbeerwald, UTM Spalte 85/Zeile 60, 30-VII-1992, *I. & P. Schönfelder* 92-1153, 92-1157, WEBER. Weg zum Cabezo del Tejo, 810 m Lorbeerwald, UTM Spalte 85/Zeile 59, 30-VII-1992, *I. & P. Schönfelder* 92-1146, WEBER. Bco. de los Cochinos, Erjos/El Palmar, 945-1030 m, Lichtung im Lorbeerwald, UTM Spalte 21/Zeile 34, 13-VII-1992, *I. & P. Schönfelder* 92-1037, WEBER. Weg im Bco. Ruiz oberhalb der Straße, 640-700 m, UTM Spalte 41/Zeile 39, 26-VI-1992, *I. & P. Schönfelder* 92-896, 92-898, 92-899, 92-900, WEBER. Bco. Siete, Lorbeerwaldreste bei El Camino de Chasna, UTM Spalte 50/Zeile 38, 17-VI-1992, *I. & P. Schönfelder* 92-835, WEBER. El Pijaral, am Eingang von El Bailadero aus, an offenen Felsen im Lorbeerwald, 16-VIII-1992, *I. & P. Schönfelder* 92-1198, WEBER. Erjos/El Palmar, Forstpiste, 830 m, Fayal-Brezal, UTM Spalte 22/Zeile 34, 13-VII-1992, *I. & P. Schönfelder* 92-1031, WEBER. Erjos/El Palmar, Forstpiste, 900 m, Fayal-Brezal, UTM Spalte 22/Zeile 34, 13-VII-1992, *I. & P. Schönfelder* 92-1030, WEBER. Erjos/El Palmar, Lorbeerwald, 1010 m, UTM Spalte 22/Zeile 34, 13-VII-1992, *I. & P. Schönfelder* 92-1026, WEBER. Weg zwischen Erjos und El Palmar, Lorbeerwald, ca. 800 m, 29-III-1969, *Weber*, WEBER. Erjos/Los Tilos, Bco. de las Cuevas negras, 9-VI-1990, *I. & P. Schönfelder* 90-129, WEBER. Los Realejos, Parte baja ladera de Tigaiga, 24-VIII-1984, *Wolffredo Wildpret de la Torre & M. del Arca Aquilar*, TFC 25.404 indet. Madre del Agua/Agua García, 8-V-1980, *A. García Gallo*, TFC 10453, 10454, indet. Madre del Agua/Agua García, 21-V-1980, *A. García Gallo*, *A. Losada & A. Viera*, TFC 10455, 10456, 10457, indet. Madre del Agua/Agua García, 2-VI-1980, *A. García Gallo*, *L. Negrín & A. Losada*, TFC 10458, 10459, 10460, 10461, 10462, indet. Madre del Agua/Agua

García, 24-IV-1980, *W. Wildpret & A. García Gallo*, TFC 10553 indet. Agua Garcia bei Tacoronte: Lorbeerwald am Pfad nach Madre del Agua, ca. 800 m, 24-III-1969, *Weber*, WEBER. Pista Principal Monte del Agua, Parte Central, UTM 28RCS2035, 30-V-1996, *Vicente Lucía Sauquillo*, TFC 38.058. Östl. La Estercolada (Anaga), 760 m, Forstpiste im Lorbeerwald, UTM Spalte 73/Zeile 56, 25-VII-1992, *I. & P. Schönfelder* 92-1125 und 92-1129, WEBER. Vittoria, 30-VI-1892, *R. P. Murray*, JE-FOCKE. Agua Garcia, 16-VIII-1902, *M. Vahl*, C.

***Rubus palmensis* A. Hansen, Bot. Not. 125: 379 (1972)**

Typus: Canary Islands, La Palma, Cumbre Nueva, on the eastern slope near the tunnel carrying the main road from Santa Cruz to Los Llanos right through the Cumbre, in about 1200 m, 1-IX-1972, *A. Hansen* 68 (C!, holotype).

Description

Stem high-arching, angled, furrowed, 8-20 mm diameter, with numerous sessile glands (glabrous or) with sparse to numerous, patent, long simple hairs especially on the angles, few to many yellowish-green to red-brown gland-tipped bristles 2-5 mm and slender acicles and pricklets varying from 1.5 to 6 mm; prickles chiefly on the angles, grading into pricklets or bristles and difficult to count, c. 15-30 per 5 cm, slender or with a broad base, declining and curved, yellow or light brown, 2.5-4(6) mm.

Leaves (figs. 2, 3) digitate, leaflets 5, glabrescent with short simple adpressed hairs above, thinly hairy beneath; terminal leaflet 14-19 × 10-15 cm, either ovate with an acuminate apex 2-3.5 cm and subentire base or roundish with a cuspidate apex 1-2 cm and cordate base. The roundish leaflets more or less evenly serrate, the ovate ones more shallowly serrate-dentate with the principal teeth slightly prominent and retrorse; leaflets flat or more often convex, the petiolule 40-60% as long as the lamina; petiolules of basal leaflets 8-30 mm; petiole longer than the basal leaflets, yellow-green, with few to many patent simple hairs, thin gland-tipped bristles (4 mm) and acicles and 25-40 curved prickles 2-3.5 mm grading into small acicles.

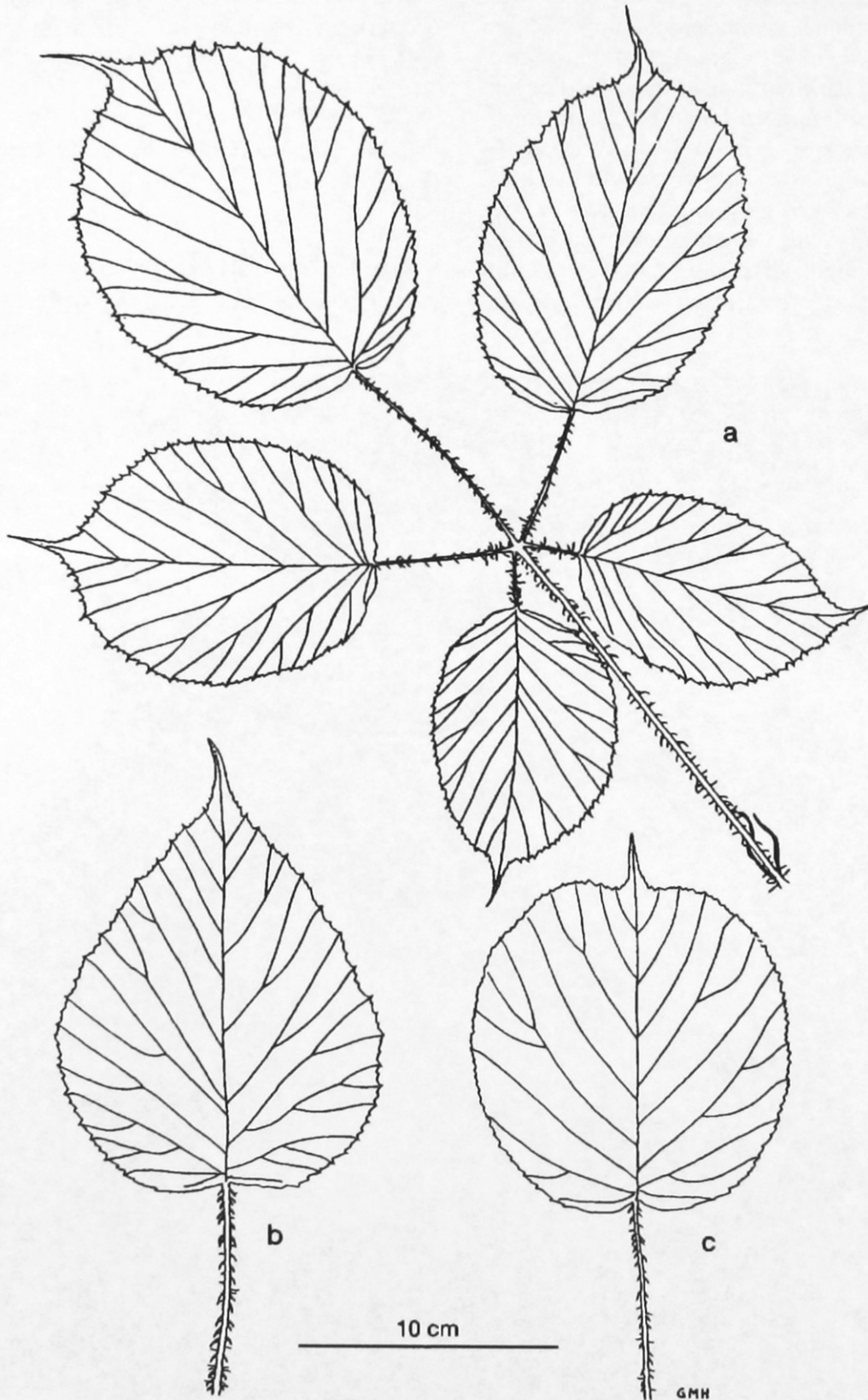


Fig. 2.—*Rubus palmensis*: a, typical leaf; b, c, variability of terminal leaflet.

Inflorescence extremely broad conical with wide-spreading peduncles, the upper 30 cm leafless; rachis straight, grey-felted above, with few dark-red gland-tipped bristles and per 5 cm with 8-15 broad-based, declined, curved prickles, 1-2 mm long. Pedicels 10-30 mm long with 0-2(5) minute prickles. Sepals, green or greyish-green, narrow with parallel margins, without prickles or bristles, short-pointed, reflexed; petals 12×6 mm or even longer, narrowly obovate, white;

filaments white, exeeding (greenish?) styles. Anthers and carpels glabrous, receptacle slightly hairy. Flowering in VI-VII.

General distribution

Canary Islands (Gran Canaria, La Palma, Tenerife).

Taxonomy

The "La-Palma-Blackberry" belongs to the series *Grandifolii* Focke, a group represented



Fig. 3.—*Rubus palmensis*: Bco. de la Galga, La Palma, 1998, G. Matzke-Hajek.

by the Madeiran *Rubus grandifolius* Lowe as the type-species (ICBN, Art. 22.5). *Rubus palmensis* is a variable taxon, but morphological deviations can be observed within single populations and are obviously the result of environmental influences.

There are plants with leaves greyish-white felted beneath, particularly at sunny sites, and others with leaflets "supra ut infra viridia concoloria" as described in the protologue and shown on the type material. However the leaves of the holotype specimen are not representative as far as hairyness, colour and size are concerned. Fully developed leaves are extremely large (40-50 cm and even more!), have long drip-tips and a fine serration, whereas those of the type material are considerably small (less than 30 cm) and show an abnormal coarse serration. Evidently the type specimen was collected from a shady site and cut from side branches or from the apical part of the shoot, as the diameter of the adherent axis clearly indicates. Another inconstant feature is the density of (gland-tipped) bristles on stem (1 and 25 per cm side), petiolules (1-15 pro cm) and the inflorescence axis (0-10 per cm).

Obviously *R. palmensis* can hybridize with *R. bollei*. Those hybrids seem to be very rare and we could trace only one specimen of really intermediate appearance (La Palma, Forstpiste SW Barlovento, Richtg. Westen, zwischen den ersten beiden Tunnels, 10-VI-1993 Norbert Meyer [Herb. MEYER]). Two more herbarium specimens are not complete (La Palma, Bco. de Facundo, 6-VII-1973, E.B. Díez [TFC 33.189]; Gran Canaria, Bco. la Virgen, 850 m, 13-VI-1974, G. Kunkel 17320 [C]), the fragments, however, show also intermediate characters: Prickles of stems and petiolules like *R. bollei*, leaf serration intermediate, long drip-tips and few gland-tipped bristles like *R. palmensis*. The plant needs further study.

Additional specimens examined

ESP, GRAN CANARIA: Bquillo. Grande, Bco. Oscuro, Moya, 975 m, sub *R. bollei*, 4-I-1980, C. Suárez, TFC 11.077. LA PALMA: Bco. Franceses, ca. 1000 m, Lorbeerwald, UTM Sp. 21/Zeile 88, 2-X-1993, I. &

P. Schönfelder Nr. 93-113, WEBER. Ob. Gallegos, nach dem 2. Tunnel von Barlovento, 800 m, Lorbeerwald, UTM Spalte 23/Zeile 89, 2-X-1993, I. & P. Schönfelder 93-115, WEBER. SW Barlovento, Grillplatz an der Waldpiste Richtg. Westen, 10-VI-1993, Norbert Meyer, MEYER. Waldpiste SW Barlovento Richtg. Westen zwischen den beiden ersten Tunnels, 10-VI-1993, Norbert Meyer, MEYER. Ob. des Bco. del Agua SW Los Sauces, Forstweg bei Espigón Atravesado, 20-III-1996, Matzke-Hajek, MATZKE-HAJEK. Bco. de la Galga, 600-500 m, Lorbeerwald, UTM Spalte 28/Zeile 84, 4-X-1993, I. & P. Schönfelder, 93-139, WEBER. Bco. de la Galga, 1.5 km west of the road from St. Cruz to Los Sauces, 23-III-1998, Matzke-Hajek, MATZKE-HAJEK. Cumbre Nueva, Forstpiste südlich des östlichen Tunnelausgangs, UTM Spalte 24/Zeile 71, 3-X-1993, I. & P. Schönfelder, 93-125, WEBER. Cumbre Nueva, Ostseite, Forststrasse südl. des Tunnels, 18-III-1996, Matzke-Hajek, MATZKE-HAJEK. Cumbre Nueva, Ostseite, Forststrasse "Los Lomos", 24-III-1996, Matzke-Hajek, MATZKE-HAJEK. Cumbre Nueva, Ostseite, ca. 300 m östl. des Tunnels an der Straße St. Cruz nach Los Llanos, 15-III-1996, Matzke-Hajek, MATZKE-HAJEK. Lorbeerwald westl. Brena Alta, ca. 850 m, 18-I-1977, Kuhbier, WEBER. Brena Alta, VI-1988, Fco. Cabrera Rodríguez, TFC 25766. TENERIFE: Anaga, V-1997, Weber mit Wildpret de la Torre & al., WEBER. Bailadero, 4-IV-1978, Milbradt, WEBER. Bco. de las Huertas, 4-VII-1973, M. Candelaria Gil Rodríguez, TFC 24.112 indet. El Pijaral, Lorbeerwald, 16-VIII-1992, I. & P. Schönfelder 92-1197, WEBER. Cabezo del Tejo, Lorbeerwald, 915-820 m, UTM Spalte 85/Zeile 60, 30-VII-1992, I. & P. Schönfelder 92-1156, WEBER. Cumbres de la Victoria, 1000 m, 14-VIII-1979, W. Wildpret de la Torre, L.N. Sosa, A.G. Gallo, TFC 24.664 sub *R. bollei*).

Rubus × wolfredoi-wildpretii H.E. Weber, **nothosp. nov.** (*R. bollei* Focke × *R. ulmifolius* Schott)

– non *R. suspiciosus* Menezes, Journ. Sci. Math. Phys. Nat. ser. 2. 7(28): 313 (1910) ("*R. bollei* × *ulmifolius*") = *R. bollei* Focke (vide p. 26)

Rubus inter Rubum bollei Focke et R. ulmifolium Schott intermedius. Differt a Rubo bollei turione paulo pruinoso, vulgo densius pilis fasciculatis minutis adpressis obsito, aculeis multo gracilioribus, (sub-) rectis; aculeis petiolorum et rachis inflorescentiae distincte gracilioribus, minus curvatis. Inflorescentia vulgo angustiora, petalis semper roseis. Differt a R. ulmifolii foliis novissimis ± rubiginosis (nunquam laete viridibus ut in R. ulmifolio), foliis turionis inflorescentiaeque ut in R. bollei

serratis, inflorescentia vulgo 15-25 cm infra apicem aphylla, formae Rubi bollei similis.

Crescit in Tenerife (fortasse ad Insulis Canariensibus aliis).

Nominatus secundum cl. botanicum amicumque mei Prof. Dr. Wolfredo Wildpret de la Torre, Universidad de La Laguna (Tenerife), eximie meritum in exploratione florum vegetationisque Insularum Canariensium.

Typus: Tenerife, Agua-García near Tacoronte, laurel forest at the path to Madre del Agua, c. 800 m above sea level, 24-III-1969, Weber 69.324.2 (TFC, holotype; Herb. WEBER, isotype).

Rubus intermediary between *R. bollei* and *R. ulmifolius*. Differs from *R. bollei* by the following characters: Stem a little pruinose, usually covered with adpressed numerous to dense small (pseudo-)stellate hairs, its prickles much narrower, straight or nearly so (not extremely broad-subtriangular with recurved tip), prickles on the petioles (of the stem leaves) and on the rachis of the inflorescence much more slender and less curved. Inflorescence usually narrower, petals always pink. Differs from *R. ulmifolius* as follows: Young leaves more or less rusty-red, stem leaves like those of *R. bollei* serrate, inflorescence usually 15-25 cm beyond the top leafless. Petals paler pink (those of *R. ulmifolius* usually rose-red).

This hybrid lacks particularly the extremely broad, on the stem nearly triangular prickles of *R. bollei* with their distinctly recurved tips and is moreover easily to be recognized in the field by its \pm rusty-reddish young leaves which remind those of *R. bollei*. It is named on terms of friendship after the well known botanist Prof. Dr. Wolfredo Wildpret de la Torre, University of La Laguna (Tenerife), the leading explorer of the flora and vegetation of the Canary Islands.

The hybrid was demonstrated by the author as a fairly common plant on a joint excursion together with W. Wildpret de la Torre and other colleagues in 1997 in the Anaga Mountains in Tenerife, but not collected at that time. Usually it occurs at sites where

both parents grow not very far in the neighbourhood. Besides the type collection, there is only one further typical specimen known: Tenerife, La Laguna, V-1968, T.C. Diaz 633 (TFC, sub *R. ulmifolius*).

Moreover there is a somewhat doubtful specimen, prickled like *R. bollei*, but with a leaf serration and an inflorescence shape like *R. ulmifolius*: El Hierro, Forstpiste ob. Frontera, 850 m, UTM 03/71, 31-VIII-1994, I. & P. Schönfelder 92.262 (Herb. SCHÖNFELDER, Herb. WEBER). Possibly it may also be a hybrid of *R. bollei* \times *ulmifolius*, and in this case in another way intermediary between its parents: Prickles like *R. bollei*, other features like *R. ulmifolius*.

The "hybrid" *R. bollei* \times *ulmifolius* described and named *R. \times suspiciosus* by Menezes is, according to the holotype, a typical *R. bollei* (see there).

Rubus bornmuelleri Focke, Sp. Rub.: 344 (1914)

= *Rubus bornmuelleri* Focke ex Bornmüller, Bot. Jahrb. Syst. 33: 435 (1903), publ. inval. (Art. 34.1 ICBN)

Loc. typ. indic.: "Auf Gran Canaria. Gehölz von Doramas in Plantago-Rasen durch Dr. Gidon gesammelt"

Typus: Forêt de Doramas, flore des pelouses a plantain, IV-1901 Gidon; J. Bornmüller, Plantae exsiccatæ Canarienses No. 229 (B!, holotype)

The type-specimen is proved to be a holotype, since Bornmüller wrote (in German) on a label "received in San Mateo from a gentleman, who possessed only this single branch". The name was not validly published by Bornmüller (1903), who rather intended an informal communication, stating "... description and publication will not be possible until instructive specimens are procured" (transl.).

The specimen represents a young plant (c. 25 cm in all) or a shoot derived from a rooted tip. It is probably grown at a shady site. The stem is covered with patent hairs, the small 3-nate leaves have ovate terminal leaflets and are green and hairy on both sides

(illustration in Focke, 1914, p. 343). The plant lacks all components required for standard material (fully differentiated leaves, inflorescence). A reliable interpretation of its identity is therefore impossible, and it must be regarded as a specimen dubium. However, 3-nate, hairy, green leaves and a hairy stem may occur in young plants also of *Rubus*-species which usually have glabrous leaves and stems, and even *Rubus bollei* and *R. ulmi-folius* can show these characters unless they are grown under normal light conditions.

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