A new genus, **Rockhausenia** (Compositae: Senecioneae: Senecioninae)

D. J. Nicholas Hind

**Summary.** *Werneria* Kunth (Compositae: Senecioneae: Senecioninae) was effectively lectotypified by Rockhausen based on *Werneria rigida*. Two later lectotypifications have apparently been made, firstly (presumably by Cabrera) *W. graminisfolia* and secondly (presumably by Funk) *W. nubigena*, yet the *Index Nominum Genericorum* website has no type stated. In removing *W. rigida* to the then newly recognised *Xenophyllum*, Funk moved Rockhausen’s type thereby creating a superfluous generic synonym. All species that Funk recognised in *Xenophyllum* are thus wernerias in the nomenclatural sense. Two species of *Xenophyllum* described since Funk’s revision are transferred to *Werneria*: *X. funkianum* and *X. lorochaqui*. The remainder of the species of *Werneria* are here placed in the new genus *Rockhausenia* (Compositae: Senecioneae: Senecioninae), a generitype is selected, and the corresponding 27 combinations are made at species level; the relevant subgeneric and sectional combinations are also made with two subgenera recognised, one with three sections. The confusion surrounding the generic name *Oresigonia* is commented on. A nomenclator of all relevant names in *Rockhausenia*, *Werneria* and *Xenophyllum*, is provided.

**Key Words.** *Anticona*, Asteraceae, Bolivia, combinations, generitype, infrageneric classification, lectotypification, *Misbrookea*, mixed collections, nomenclature, *Oresigonia*, *Werneria*, *Xenophyllum*.

**Introduction**

During October and November 2015, the author was fortunate to make a second study visit to the Herbario Nacional de Bolivia (LPB), Universidad Mayor de San Andrés, La Paz, Bolivia, to continue with his work on his *Annotated Checklist of the Compositae of Bolivia* (Hind 2011). On this occasion, amongst other things, I had the opportunity to go through several more recent collections made in the Parque Nacional Madidi, Prov. Tamayo, Depto. La Paz, Bolivia (material collected as part of a long-term collaboration between LPB and Missouri Botanical Garden — MO). Included within the collections were four of an unusual looking species of what appeared to belong to *Werneria* Kunth (Compositae: Senecioneae: Senecioninae). Other than one evidently alcohol-treated collection, the other three show distinctive purplish abaxial leaf surfaces, purple, sparsely to moderately, villous pedicels, phyllaries with the apex or apical half coloured purple, and white ray limbs markedly pinkish towards the abaxial surface of the apex. A loan of this material from LPB to K was secured, in order to study the specimens further, and prepare a line drawing of the taxon.

*Werneria*, in the original sense, can be recognised by the following broad diagnostic description: Plants rhizomatous perennials, or dwarf erect or decumbent subshrubs, rarely of solitary rosetiform plants. Leaves simple, alternate or rosulate, rarely distichous, bases often pseudopetiolate and frequently sheathing, or leaves somewhat fleshy, conspicuously 3-partite and narrowed into a pseudopetiolar base. Inflorescences sessile or scapose, single-headed, usually ebracteate, or bracts foliose to scale-like, glabrous or lanate. Capitula usually heterogamous and conspicuously radiate, or sometimes disciform, or rarely homogamous and discoid; involucres campanulate and ecalyculate; phyllaries uniseriate, linear, bases usually fused, apices acute or obtuse; receptacle flat to convex, glabrous and epaleaceous. Ray florets (when present) few to many, female and fertile, ray limbs often appearing entire or scarcely 3-toothed, white or yellow, often discolorous and reddish, pink, or purplish abaxially. Disc florets few to numerous, hermaphrodite, corollas 5-lobe, usually yellow, sometimes off-white or purplish; style arms truncate with sweeping hairs in a crown. Achenes usually glabrous, sometimes setuliferous, setulae of twin-hairs, these long and villous; carpopodium inconspicuous and annular; pappus setae uniseriate, setae persistent and finely barbellate, usually white, whitish or rarely purplish or pinkish.

A comparison of the material mentioned above with the other species listed and accepted by Rockhausen (1939b), Hind (2011), Jørgensen *et al.* (2005), and Jørgensen (2014), for Bolivia, and those taxa in neighbouring Peru (Beltrán 2017; Beltrán & Leiva 2018), showed no obvious match in the genus...
Werneria. Analysis of the material in K, and subsequent contemporary studies, have shown this material to be Werneria glandulosa Wedd. (c.f. Calvo et al. 2020a: 33 – 35). Rockhausen (1939b: 334) listed the name under ‘Species incertae et excludendae. A. Species incertae’, with the note that Von folgenden Arten hatte ich keine Material und keine Originale vorliegen. Fernerin was es nicht möglich, dieselben nach der Beschreibung sicher einzureihen.’ (= ‘I had no material and no originals of the following species. Furthermore, it was not possible to classify them with certainty according to the description.’).

In adding Werneria glandulosa to the final version of my Annotated Systematic Checklist of Bolivian Compositae (Hind 2011), it became clear that there was a nomenclatural issue with continuing use of the current concepts of Werneria sensu stricto and Xenophyllum V.A.Funk.

Werneria, described in Nova Genera et Species Plantarum (Kunth 1818: 148), contained six species now considered to belong to two genera, Werneria sensu stricto and Xenophyllum (22 spp. — Funk 1997c; Calvo & Moreira-Muñoz 2020). Kunth did not designate a type, nor did he recognize any infrageneric ranks, and the generic description covered the characters of all the species described. The current record for Werneria in Index Nominum Genericorum (Farr & Zijlstra 1996+) indicates that there is no stated or selected type; from my discussion below, this is shown to be incorrect, as suggested by the literature (Rockhausen 1939a; Cabrera 1971; Funk 1997a, Funk 1997c; Freire & Ariza Espinar 2014; Linares-Perea et al. 2014; Calvo et al. 2017; Beltrán & Leiva 2018; Calvo & Meneses 2019; Calvo & Moreira-Muñoz 2019; Calvo et al. 2020a, b).

The issue

Lectotypification of Werneria Kunth

There is a categorical statement in Rockhausen’s revision of Werneria; ‘Gattungstypus ist Werneria rigida.’ (Rockhausen 1939a: 249), and later (p. 293) he specified the type of the name W. rigida as a Humboldt & Bonpland collection. His description of the species is not in conflict with Kunth’s generic description, and there was no sense of doubt over his statement of the genericity. He placed the species in his ‘subgen. Esawerneria (Gay) Rockh. sect. Aciculares Rockh.;’ both infrageneric concepts contain the nomenclatural type of the genus (the genericity) and would now be considered as subgen. Werneria and sect. Werneria. This typification appears to have been overlooked, or ignored, by later authors, as many have only cited the second part of Rockhausen’s revision, and continue to use a nomenclaturally incorrect concept of Werneria, unaware of the implications (e.g. Linares-Perea et al. 2014; Calvo et al. 2017; Beltrán & Leiva 2018; Calvo & Meneses 2019; Calvo & Moreira-Muñoz 2019; Calvo et al. 2020a, b).

Three further statements of the ‘lectotype’ of Werneria have been made:

1) Although Cabrera’s early revision of the Argentinian species (Cabrera 1948) mentioned nothing about the type, he later (Cabrera 1971: 275) stated that the lectotype was W. graminifolia Kunth. He repeated this statement (Cabrera 1978: 469), whilst still not stating who designated it; it is assumed that it was Cabrera himself. Calvo et al. (2020a: 6) stated that it was Cabrera in his Flora Patagonica account (Cabrera 1971: 275). Werneria graminifolia, an Ecuadorian endemic, occurs in none of Cabrera’s treatments of the genus.

2) In recognising Misbrookea V.A.Funk, Funk (1997a: 110, 1997b) stated that the ‘type species’ was ‘Werneria nubigena H. B. K., and [the genus] is referred to hereafter as Werneria s.str.’ In both cases she only cited the second part of Rockhausen’s paper on Werneria (Rockhausen 1939b), possibly unaware of the first part where the type citation was made and several new infrageneric taxa described (Rockhausen 1939a). Later, Funk (1997c: 235), in her description and synopsis of Xenophyllum, again mentioned that ‘Werneria s.l.’ contained at least three identifiable groups ... that can be recognized as distinct genera.’ One of these ‘contains the type species, Werneria nubigena Kunth, and can now be referred to as Werneria s. str.’; Xenophyllum dactylophyllum (Sch.Bip.) V.A.Funk was designated as the type of Xenophyllum. In none of the accounts is there any indication who designated W. nubigena as the lectotype of Werneria; it can be assumed to have been selected by Funk, unless evidence is eventually found to the contrary.

3) Freire & Ariza Espinar (2014: 220) stated that the lectotype of Werneria was W. graminifolia, as indicated by Cabrera (1971: 275), but also noted the other citations by Rockhausen (but only citing the second part of Rockhausen’s revision, Rockhausen 1939b — where the type citation does not occur) and Funk (1997b). No additional explanation was provided as to why W. graminifolia was accepted as the lectotype over the selection by Rockhausen.

No type was designated or mentioned by Gray (1861), or Blake (1928), when several new species were added in their short synoptic treatments. Tkach et al.’s statement, that Werneria nubigena was the ‘type species of Werneria Kunth’, with reference to the Index Nominum Genericorum website (Tkach et al. 2016: 101), is also without foundation. The website simply records the type as ‘non designatus’, and gives no indication of a lectotype (ING, last accessed 10th October 2020).

The position of Oresigonia

Lessing (1832: 393) appears to have been the first author to mention the generic name Oresigonia, albeit referring to two completely different taxa. He first used it under his treatment of Werneria, alongside
Werneria disticha Kunth, in referring to Willdenow's manuscript name, Oresigonia latifolia. It was used lower down on the same page in reference to Culcitium Humb. & Bonpl., albeit as 'Oresigonia Schlecht. im Mag. naturf. Fr.' Lindley (1836: 261) also attributed Willdenow's mss. name to Werneria and, immediately after, Schlechtendal's to Culcitium, a position reflected by de Candolle (1838: 323) with the generic name as 'Oresigonia Willd. herb. ex Less.' in the synonymic heading to his treatment of Werneria, and on the following page as 'Oresigonia Schlecht. in Berl. naturf. mag. ex Less.' in the synonymic heading to his treatment of Culcitium. The explanation of this was effectively provided by Blake (1937: 389 – 390), as simply an error on Lessing's part, by wrongly referring to Schlechtendal's genus Lasiocephalus (Schlechtendal 1818: 308) as Oresigonia. Both Lindley and de Candolle had followed Lessing, as did other contemporaneous compendia (e.g. Endlicher 1841: 244), and those from much later (e.g. Baillon 1882: 269 & 261 respectively).

I consider this is significant, as Willdenow's annotations of material seen in B-W are only on sheets of Werneria sensu lato; both species of Lasiocephalus are only annotated as such by Willdenow.

Recognition of the new genus Rockhausenia
Jørgensen (2014: 380) recorded 15 species of Werneria from Bolivia, based in part on the eight previously recorded for the Parque Nacional Madidi (Jørgensen et al. 2005); Mishbrookea strigosissima (A.Gray) V.A.Funk (based on W. strigosissima A.Gray), Xenophyllum ciliolatum (A.Gray) V.A.Funk (based on W. ciliolata A.Gray), and X. dactylophyllum (Sch.Bip.) V.A.Funk (based on W. dactylophylla Sch.Bip.), have since been excluded from the original Madidi total of 11. I now recognise 18 taxa from Bolivia belonging to Werneria sensu Funk (1997b), Jørgensen (2014: 380), and Calvo et al. (2020a, b).

Mishbrookea, Werneria and Xenophyllum form a well-supported subclade that is sister to a further strongly supported subclade formed by Charadranaetes Janovec & H.Rob., Dorobaea Cass., Garcibarriga Cuatrec., Jessea H.Rob. & Cuatrec., Pseudogynoxys (Greenm.) Cabrera and Talamancalia H.Rob. & Cuatrec. (Pelsor et al. 2007). Anticona E.Linares, J.Campos & A.Galán (based on Werneria glareophila Cuatrec.) has never been sampled, so its relationship has yet to be elucidated. The generic disposition of the wernérias needs to be reconsidered.

Synoptic treatment of Rockhausenia
I have refrained from providing a key to species as there is a perfectly adequate key to all species in Calvo et al. (2020a), and a country-specific key is available for Peru by Beltrán (2016) and Argentina (Freire & Ariza Espinar 2014). Adequate keys to taxa originally considered to be in Xenophyllum were provided by Calvo & Moreira-Muñoz (2019) expanded from Funk (1997c).

In the following synoptic treatment of Rockhausenia, under each accepted name synonyms are provided in chronological order. For each name references are provided, and a type citation given for all basionsynonyms. The type citation is a classical one, and is simply a transcription from the basionym protologue. The location of known types is stated (acronyms following Thiers [continuously updated]) and, when available, barcode numbers of type material given. In instances where institutional barcodes unnecessarily start with six or more zeros the barcode number is concatenated to the remaining digits — the suggestion that institutions could ever have that number of specimens when fully digitised is, frankly, ludicrous. Herbarium or manuscript names are also provided where they are relevant to the history of taxa concerned and have appeared in the literature. A full nomenclator of names is also provided.

HAL type material
Whilst Hind & Jeffrey (2001) indicated duplicates of the Humboldt & Bonpland collections exist in both B-Willd and P, there are many duplicates to be found elsewhere. I have come across few duplicates in RB during an earlier study visit but, as many virtual herbaria have now come online over the last few years, a large set is clearly in HAL. Tkach et al. (2016) have stated that the Humboldt & Bonpland specimens in HAL are duplicates of specimens in the Willdenow herbarium (B-W). The collections are unnumbered, having reached the University herbarium via Schlechtendal junior (D. F. L. von Schlechtendal 1794 – 1866); they are all considered syntypes. Handwritten sheet annotations and labelling are considered to be those of Schlechtendal senior (D. F. C. von Schlechtendal 1767 – 1842), whereas the main sheet labels are modern printed labels based on the protologue details and the B-W source of the material.

Rockhausenia D.J.N.Hind, gen. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300544-1

Type: Werneria nubigena Kunth = Rockhausenia nubigena (Kunth) D.J.N.Hind

Description
Perennial rosulate, sometimes clump-forming, herbs. Rootstock often rhizomatous, lanate or villous amongst
leaf bases. Leaves rosetiform, very rarely distichous, sessile, base usually expanded and partially sheathing or amplexicaul, blade linear to linear-lanceolate or spatulate, sometimes fleshy, glabrous or with villous to lanose leaf bases, rarely lamina pubescent, hairs with an eglandular long-flagelliform apical cell on top of a multicellular uniseriate base of thickened-walled cells, margins entire, lobed or pinnatisect, apex rounded, obtuse or acute to acuminate. Inflorescence of solitary, sessile or short- to long-pedicellate to scapiform capitula borne in centre of rosette, pedicel or scape glabrous or pubescent, ebracteolate or bracteolate, bracteoles scale-like. Capitula heterogamous and radiate or, very rarely, disciform or occasionally homogamous and discoid; involucre campanulate, ecalyculate; phyllaries 8–21, uniseriate, connate for at least half of length, glabrous or pilose, apices often purplish, penicillate; receptacle flat or convex, glabrous, rarely alveolate, epiacleaceous. Ray florets 13–21, female, fertile, uniseriate, but sometimes appearing biseriate, ray limb 2–3-toothed (sometimes scarcely appearing denticulate), white or cream, adaxially, usually discolorous and reddish abaxially, or yellow (and then never discolorous), very rarely purple. Disc florets hermaphrodite, 20–200, fertile, corollas actinomorphic, tubular, glabrous, throat narrowly campanulate, 5-lobed, white or yellow, or white or yellow in bud but corollas clearly creamish or whitish when lobes open; anthers yellow, or black or violet, anther collar balusterform, apical anther appendages oblanceolate, obtuse, basal anther appendages sagittate; style base with basal node, style yellow, cream, white or red, style arm apices truncate to obtuse or rounded, papillate, papillae forming a corona. Achenes cylindrical, 8–10-ribbed, glabrous or setuliferous, setulae often long and sericeous; carpodium usually minute and annuliform; pappus setae uniseriate, capillary, barbellate, persistent, bases connate into ring, usually white, sometimes turning purplish with age.

**RECOGNITION**. Species of *Rockhausenia* are mostly low, perennial mat- or cushion-forming perennials, very rarely aquatics or marginals, although sometimes also found as isolated rosetteform plants/individuals. Species usually have entire (rarely pinnatifid/lobed) concolorous leaves, and characteristically have solitary, sessile or pedicellate, capitula, an involucre of basally fused uniseriate phyllaries, and discolorous ray florets limbs that are usually white (rarely yellow) adaxially and pinkish or purplish abaxially; three species (of the 27 in the genus) possess discoid capitula. In contrast, *Werneria* spp. usually form dense or loose hummocks or mat, with the rhizomes and upper stems densely leafy for some length, with the exposed leaves green and those within the tussock or mats often brown or blackish (or sometimes whitish). The capitula in *Werneria* are heterogamous and radiate (very rarely are the rays greatly reduced or absent and the heads effectively disciform), ray limbs are usually white or very rarely violet-purple or yellow. *Misbrookia*, a rhizomatous rosetteform monotypic genus from Bolivia and Peru, is easily recognised by the long (3–5 mm) whitish strigose hairs found on both leaf surfaces and on the involucres (vs glabrous leaves and involucres or villous scape and involucres in few *Rockhausenia* spp.), and style arm apices with long multicellular hairs.

**DISTRIBUTION**. The genus *Rockhausenia* is a New World endemic, essentially restricted to South America, currently with 27 species of the high Andes (of Argentina, Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela), with the exception of the most widespread species, *Rockhausenia rubigena* (Kunth) D.J.N.Hind, which is found from southern Mexico and Guatemala south to southern Bolivia.

**New combinations in *Rockhausenia***

For convenience, the taxa appear in the order treated by Rockhausen (1939a, b) together with several additional species added where appropriate.

*Rockhausenia* D.J.N.Hind subgen. *Anactis* (J.Rémy) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300545-1

*Werneria* Kunth [unranked] § II. *Anactis* J.Rémy, Fl. Chilena (Gay) 4: 216 (1849). Note: The symbol used by Rémy is a typographical section symbol §. Elsewhere Rémy used the abbreviation ‘Sec.,’ or even in expanso, ‘Section’, with the || symbol as a clear lower rank — in *Cardamine* for example (1: 109), or *Nasturtium* (1: 117) — where it was certainly used as a section! However, the word ‘Section’ has been used as another rank, below tribe, and above genera.

*Werneria* Kunth subgen. *Anactis* (J.Rémy) Rockh. (Rockhausen 1939a: 265).

*Werneria* Kunth subgen. *Anactis* (J.Rémy) Rockh. sect. *Pinnatifoliae* Rockh., Bot. Jahrh. Syst. 70 (2): 265 (Rockhausen 18 August 1939a). Note: Considered as ‘nom. inval.’ by Calvo et al. (2020a: 6) under Art. 22.2 of the current Code (Turland et al. 2018), as it contained the type of the genus. This is untrue, as the type of the genus was, in their mind, *Werneria graminifolia*. Since this is clearly not the case, the name is perfectly valid.

Type: *Werneria pinnatifida* J.Rémy = *Rockhausenia pinnatifida* (J.Rémy) D.J.N.Hind

1. *Rockhausenia pinnatifida* (J.Rémy) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300548-1
Werneria pinnatifida J.Rémy, Fl. Chilena (Gay) 4 (2): 216 (1849). Type: [Chile:] ‘Se cria tambien en las cordilleras de los Patos.’ Note: This reference is to the locality provided after Werneria rhizoma — ‘Se halla en las cordilleras de Ovalle, á los Patos.’ Lectotype (selected by Freire & Ariza Espinar 2014: 222): P(02088545 – Gay, s.loc., s.n., the sheet label is marked ‘216’ on the top left hand corner, signifying the page upon which it was published). Note: The image of B†(FOBN15815 — showing it was mounted with a specimen of ‘Werneria incisa’) lacks the original sheet label merely stating ‘Atacama’ on the paper ruler. Calvo et al. (2020a: 63) declared the type collection as ‘C. Gay 703, presumably based on one of the listed isolecotypes, although not stating which: ’F(974712), GH[(00936611 — s.m.)], P(04023489 — numbered ‘450’ on a small paper label, det. ’ISOLECTOTYPE’ by Calvo, ’Sep. 2019’), SGO(000060432)].

Werneria heteroloba Wedd. (Weddell 1856: 88). Types: ’Hab. PERÚ: Cordilleras du département de Cuzco! (Gay). – BOLIVIE: sur les pelouses marécageuses de la Lancha!, Cordillère de La Paz, avec le W. pygmaea (Wedd.); bord des eaux, dans les montagnes des lagunas de Potosí! (d’Orbigny, n° 1415).’ Syntype: Gay s.n., P(06898872, 6898874 — both specimens unmarked as syntypes). Syntypes: (Orbigny 1415, G(00305497), P(02088558), 02088560). Syntype: Weddell, P(0089754 — marked as ’1’ on the sheet label by Weddell, although only the material that is ‘Werneria pygmaea’ is numbered ‘2’ under each specimen on the sheet itself). Lectotype (selected by Freire & Ariza Espinar 2014: 222, effectively second-step): d’Orbigny 1415, P(02088558); isolecotypes: G(00305497), P(02088560). Note: Rockhausen (1939b) used the word ‘Typus!’ after his citation of the material of the d’Orbigny 1415 collection, although it is unclear from his account if this was merely a citation of a syntype or an effective lectotypification since the other syntypes were not mentioned.

Werneria obtusiloba S.F.Blake (1928: 489). Type: ’PERÚ: In sandy soil, with cushion and rosette plants, cordiller a east of Carumas, Prov. Moquegua, alt. 4500-4600 m., 7-8 Mar. 1925, A. Weberbauer 7362’. Holotype: F(552591); isotypes: G(00305496), US(44298 = 00037327).

Werneria heteroloba Wedd. var. obtusiloba (S.F.Blake) Rockh. (Rockhausen 1939b: 283).

Werneria heteroloba Wedd. f. microcephala Rockh. (Rockhausen 1939b: 283). Type: ’Chile: Lago Chungara, in Sümpfen, 4550 m ü.M. (C. TROLL Nr. 3222 – März 1927.)’ Holotype: B†. Note: Calvo et al. (2020a: 63) lectotypified the name based on the destroyed type material. There being no extant original material a neotype should have been designated, although this I consider unnecessary.

**DISTRIBUTION.** Argentina (Catamarca, Jujuy, Salta, San Juan, Tucumán), Bolivia (Cochabamba, La Paz, Oruro, Potosí), Chile (Antofagasta, Arica and Parinacota, Atacama, Coquimbo, Tarapacá), Peru (Ancash, Arequipa, Cusco, Huancavelica, Moquegua, Puno).

**NOTE.** Beltrán (2017: 48) considered Werneria obtusiloba was separate from W. heteroloba, a position not accepted here.

2. Rockhausenia solivifolia (Sch.Bip.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300549-1

**Werneria solivifolia** [as solivaefolia] Sch.Bip., Bonplandia 4 (4): 53 (Schultz Bipontinus 1856). Type: [Peru:] ’Nun kommen noch zwei neue Wernerien zur Aburtheilung, welche mir unter [Lechler] Nr. 1710, in uliginosis Cord. de Tuno, Mai 1854 in Chelreria ähnlichen Rasen, in welchen die kleinen Köpfchen versenkten waren, wachsend, mitgetheilt wurden.’ Note: In the subsequent listing (Hohenacker 1856: 55) it appears that Werneria brachypappa was based on Lechler 1710a, and W. solivifolia on Lechler 1710b. Type material: K(000527612 — as Lechler ’1710’ on the capsule, separated from the block of Distichia musoides Nees & Meyen (Juncaceae) and placed in the Ih capsule). Note: Although Schultz Bipontinus provided a Latin description on P(02088539) there is no material of this species visible on the sheet. Lectotype (selected by Calvo et al. 2020a: 88): K(000527612 — only material in the small capsule on the sheet).

**DISTRIBUTION.** Bolivia (La Paz, Potosí), Chile (Arica & Parinacota), Ecuador (Pichincha), Peru (Arequipa, Huancavelica, Junín, Lima, Moquegua, Puno, Tacna).

**Rockhausenia** D.J.N.Hind subgen. **Rockhausenia**

**Werneria** Kunth subgen. **Werneria** [as Euwerneria] (Gay) Rockh., sect. **Integrifoliae** Rockh., Bot. Jahrb. Syst. 70 (2): 266 (Rockhausen 18 August 1939a).

**Rockhausenia** D.J.N.Hind subgen. **Rockhausenia** sect. **Integrifoliae** (Rockh.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300550-1

**Werneria** Kunth subgen. **Anactis** J.Rémy sect. **Integrifolia** Rockh., Bot. Jahrb. Syst. 70 (2): 265 (Rockhausen 18 August 1939a).
Werneria mocinniana DC. (de Candolle 1838: 324). Type: Oresigonia latifolia Willd. ex DC. (de Candolle 1838: 324), Kunth (1818: 151). Type: Werneria disticha

3. Rockhausenia carnulosa (A.Gray) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300552-1

Werneria carnulosa A.Gray, Proc. Amer. Acad. Arts 5: 140 (1861). Type: ‘High Andes of Peru. [Wilkes]’. Holotype: GH; isotype: US(00037298).

DISTRIBUTION. Peru (Ancash, Huánuco, Junín, Lima, Pasco).

Rockhausenia subgen. Rockhausenia sect. Rockhausenia Type: Werneria nubigena Kunth = Rockhausenia nubigena (Kunth) D.J.N.Hind

4. Rockhausenia nubigena (Kunth) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300553-1

Werneria nubigena Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 151 (1818). Type: [Ecuador:] ‘Crescit in frigidis montis Chimborazi, alt. 1700 hex. (Regno Quitensi.) ... Floret Junio.’ [‘Humboldt & Bonpland P-Bonpl - ‘3191. Chimborazo’; B-W: ‘3191’] Holotype: P-Bonpl (P00320184); isotypes: B-W(16428-01), HAL(0113455), P(04318258). Note: Tkach et al. (2016: 101) considered the material in HAL a syntype, but also stated that this was the type species of Werneria Kunth, referring to 'ING', this referring to the ING website.

Werneria disticha Kunth (1818: 151). Type: ‘Crescit in summo monte ignivomo Antisanae, alt. 2100 hex. ... Floret Junio. ’[‘Humboldt & Bonpland 2272’] Holotype: P-Bonpl. (00320185); isotypes: B-W(16429-01), HAL(0113454 — lacking any number or locality on the label), P(02088530, 02088542). Note: Tkach et al. (2016: 101) considered the material in HAL a syntype.

Oresigonia latifolia Willd. ex Rockh. (Rockhausen 1939b: 301), nom. nud. pro syn., based on B-W(16428 — Humboldt & Bonpland 3191, an isotype of Werneria disticha Kunth).

DISTRIBUTION. Bolivia (Cochabamba, La Paz, Tarija), Colombia (?), Ecuador (Azuay, Bolívar, Cañar, Carchi, Chimborazo, Cotopaxi, Imbabura, Loja, Napo, Pichincha, Sucumbios, Tungurahua), Guatemala (Huehuetenango, Quetzaltenango, San Marcos), Mexico (Chiapas), Peru (Amazonas, Ancash, Apurímac, Arequipa, Ayacucho, Cajamarca, Cusco, Huancavelica, Huánuco Junín, La Libertad, Lambayeque, Lima, Moquegua, Pasco, Piura, Puno, San Martín).

5. Rockhausenia plantaginifolia (Wedd.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300554-1

Werneria plantagnifolia Wedd. ex Klatt, Ann. K. K. Nat. Hist. Hofm. Wien 9 (3): 367 (1894). Type: [Bolivia:] ‘Hab.: Prov. Larecaja, vincentii Sorata, prope las trincheras de Chiliata, in graminosis, Reg. alpina, 3800 m., leg. Mandos, Mart.-Mai 1859, Nr. 89.’ Type material (see note): B(008015821), G(00305795 — databased as the ‘Neotype’), K(000527610), LL(00374331), P(02690589, 04318258, 04388253), S-R-6526. Lectotype (selected here): P(04318258). Note: Amongst the type materi-
al, that selected as the lectotype is the only material of *Mandon* 89 with the same locality details as provided in the protologue. However, the locality was probably not fully transcribed by Klatt, as it reads ‘Viciniis Sorata: propé las trincheras de Chilita [sic!] Sº, [sic!] in graminosis. Alt. Reg. alpinae 3800 m, Mart-Mai 1859.’ The remainder of the material, although of *Mandon* 89, is labelled as ‘Viciniis Sorata; adscensu à Millipaya ad nives, in graminosis. Alt. Reg. alpina: 3800 m. Mai. 1859.’ [trincheras = trenches] ‘Chilita’ is also written ‘Chillita’ on other Mandon collection labels.] [Millipaya (3850 m) is SW of Illampu.]

**Werneria plantaginifolia** Wedd. ex Klatt var. *macrocephala* Cuatrec. (Cuatrecasas 1953a: 153). Type: Peru: Dep. Apurímac, prov. Abancay; Punas de Ampay, 3900 m alt., collect. Jun. 1938 Cesá Vargas 1047. (Holotypus, F – no barcode number available [Photo Neg. No. 49324].)

**DISTRIBUTION.** Bolivia (La Paz), Peru (Apurímac, Ayacucho, Cusco, Junín).

6. *Rockhausenia staticifolia* (Sch.Bip.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:7730055-1

**Werneria staticifolia** [as *staticaefolia*] Sch.Bip., Bonplandia 4 (4): 53 (Schultz Bipontinus 15 Feb. 1856). Type: [Peru:] ‘St. Gavan in summis Cordil. jugis Jul. 1854: Lechler Nr. 2212.’ Holotype: P(02088546 & 02088547 – the type sheet has two specimens and two barcodes although it is likely that this is simply one collection and specifying one as a lectotype is unnecessary; the sheet is det. Funk, September 2011, as the lectotype; the pencilled lines and arrows on the sheet are not self-explanatory, as apparently only arrowing the labels that do not indicate two different collections); isotypes: B (F0BN015822 – lacking an image of the label), G (00305495), K(000527600), M(0147066), P(00711471; 02088548 — det. Funk, September 2011, as islectotype), S-R-6528. Beltrán (2017: 58) only cited ‘Lectotypo: P. P0208854’, failing to provide the last digit and certainly not specifying which of the two sheets this applied to; if it was only to the sheet determined by Funk neither specimen was mentioned.

**Werneria nubigena** Kunth var. *δ caulescens* Wedd. (Weddell 1856: 81). Type: not clearly stated. Weddell (1856) noted ‘Pérou: Cordillères des départements d’Arequipa et de Cuzco (a, γ, δ et ε) (Gay, Dombey) …’ as the only mention of material against the varietal name but without indicating to which taxon the material referred as two subvarieties (subvar. *leioscapa* and *erioscapa*) were also described, q.v.

**Werneria nubigena** Kunth var. *δ caulescens* Wedd. subvar. *leioscapa* Wedd., (Weddell 1856: 81). Type: not indicated.

**Werneria nubigena** Kunth var. *δ caulescens* Wedd. subvar. *erioscapa* Wedd. (Weddell 1856: 81). Type: not indicated.

**Werneria staticifolia** Sch.Bip. var. *β celmsiosii* Wedd. (Weddell 1856: 82). Type: [Peru:] ‘sur les sommités de la Cordillère de Tabina (Lechler, n° 2111).’ Holotype: P; isotype: K(000527609). Note: Although, at some length, Rockhausen (1939b: 307 – 308) discussed this variety, the complete lack of any pubescence at the base of the involucre suggests it is best placed under *R. plantaginifolia*, although Schultz Bipontinus clearly noted that the achenes of *Lechler* 2111 were glabrous, a feature of *R. staticifolia*. However, Lechler 2111a, labelled as ‘Werneria celmsiosii Sch.Bip.’, is in fact a specimen of Hypochaeris, and not a *Werneria* or *Rockhausenia*.

**Werneria caulescens** (Wedd.) Hieron. (Hieronymus 1895: 363), isonym. Note: Hieronymus (1900: 74) oddly stated his combination was based on Weddell’s variety, but his concept was not that of Grisebach’s; Grisebach had based his combination on the same basionym and did not exclude any material. Rockhausen (1939b: 337) indicated this isonym was *W. staticifolia*.

**Werneria caulescens** (Wedd.) Rusby (1907: 398), isonym.

**DISTRIBUTION.** Bolivia (La Paz), Peru (Cusco).

7. *Rockhausenia villosa* (A.Gray) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:7730055-1

? **Werneria nubigena** Kunth var. *ε dombeyana* Wedd. (Weddell 1856: 81). Type: not clearly stated. Note: Weddell (1856: 81) noted ‘Pérou: Cordillères des départements d’Arequipa et de Cuzco (α, γ, δ et ε) (Gay, Dombey) …’ as the only mention of material against the varietal name but without indicating to which taxon the material referred. Rockhausen (1939b: 338) suggested the possible synonymy under *W. villosa*. Beltrán (2017) indicated it was a synonym of *W. nubigena*.

**Werneria villosa** A.Gray, Proc. Amer. Acad. Arts 5: 139 (1861). Type: ‘High Andes of Peru near Alpamarca [Collections of the United States South Pacific Exploring Expedition under Captain Wilkes].’ Holotype: GH; isotypes: K(0005327606), P(02088554), US(42760 = 00037590).

**Werneria caulescens** (Wedd.) Griseb. (Grisebach 1879a: 208, 1879b: 208). Note: Both the proposed combinations of Hieronymus (1895) and Rusby (1907) refer...
to material that Rockhausen (1939b: 337) considered belonged to *W. staticifolia* (= *R. staticifolia*), q.v. 

*Werneria acerosifolia* Hieron. (Hieronymus 1895: 363). 

Type: ‘Peruvia: crescit prope Fraileyacu inter Ventilla y Bayazan, collecta fuit in itinere inter Pacasmoay et Moyobamba, fleort mense Maio ([Stübel] coll. peruv. n. 25a).’ Holotype: B(F0BN015800). Note: Beltrán (2017: 56) considered this a synonym of *W. pumila*, along with with *W. canaliculata*. Calvo et al. (2020a: 95 – 96) proposed the current synonymy, but refrained from neotypification (because of the poor state of the, now destroyed, type material illustrated in the Field Museum Berlin Type negative collection).

*Werneria caulescens* (Wedd.) Rusby (Rusby 1907: 398), isonym.

**DISTRIBUTION.** Argentina (Jujuy, Salta, Tucumán), Bolivia ( Chuquisaca, Cochabamba, La Paz, Oruro, Potosí, Tarija), Peru (Ancash, Apurímac, Cajamarca, Cusco, Huancavelica, Huánuco, Junín, La Libertad, Lambayeque, Lima, Pasco, Piura, Puno, San Martín).

8. **Rockhausenia pumila** (Kunth) D.J.N.Hind, comb. nov. 

http://www.ipni.org/urn:lsid:ipni.org:names:77300557-1

*Werneria pumila* Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 148 (1818). Type: ‘Crescit cum praecedentibus.’ [*Werneria rigida & humilis*: Crescit in summis Andibus Quitensium, alt. 1800 – 2000 hex. [*Humboldt & Bonpland*] Holotype: P(00320182); isotype: B-W(16430-01).] Note: Nordenstam’s citation of the holotype in P (Nordenstam 1999: 314), Calvo et al. (2020a: 71) considered to be effective lectotypification.

*Werneria densa* Benth. (Bentham 1845: 211). (Colombia:)

‘[Hartweg] 1168. ... In sabulosis montis Antisana, altit. 15,000 ped.’ Holotype: K(specimen unbarcoded and still on loan to US — ex Herb. Benthamianum); isotypes: E(00413267), K(000527603 — ex Herb. Hookerianum), LD(1211958), P(02088562, 02088563), US(00037304). Note: Regrettably, the specimen chosen by Calvo et al. (2020a: 71) as the lectotype of the name was not the specimen used by Bentham in writing his account of the Hartweg collections — the material ex Herb. Benthamianum (Bentham 1839 – 57).

*Werneria calyciflora* Turcz. (Turczaninow 1851: 204). Type: ‘In summis alpibus Quitensibus. *Jameson* coll. n. 618 – No. 809 ejusdem collectionis videtur ad W. frigidam HB. Kunth spectare.’ Type material: BM, G(00050796, 00050797), K(000374197 — mounted with Holton 399, Purdie s.n. and Pearce s.n. — ex ‘Bogata, 9-10000 ft March 1864’), KW(001001520 — ‘618/ From the summit of the Andes in Jameson’s hand, and additionally labelled ‘In summis alpibus Quitensibus/ Jameson coll: n. 618’ from the protologue). Lectotype (selected by Calvo et al. 2020a: 71): KW(001001520).

*Werneria pumila* Kunth var. β subspathulata Wedd. (Weddell 1856: 82), based on ‘W. densa Benth., Pl. Hartw., 214; Wlprs. Repert., VI, 254.’ *Oresigonia angustifolia* Willd. ex Rockh. (Rockhausen 1939b: 310), nom. nud. pro syn., based on B-W(16430-01 — an isotype of *Werneria pumila* Kunth)

**DISTRIBUTION.** Colombia (Arica, Caldas, Risaralda, Tolima, Valle del Cauca), Ecuador (Azüay, Bolívar, Chimborazo, Cotopaxi, Imbabura, Loja, Morona-Santiago, Napo, Pichincha, Tungurahua, Zamora-Chinchipe), Peru (Piura).

9. **Rockhausenia graminifolia** (Kunth) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300558-1

*Werneria graminifolia* Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 148 (1818). Type: ‘Crescit in alta planitie Antisanae, — Crescit cum praecedentibus.’ [Willd. ex Rockh. *Oresigonia parvi* Willd. ex Rockh. (Rockhausen 1939b: 310), nom. nud. pro syn., based on B-W(16430-01 — lacking original label and det. Willdenow as *Oresigonia parvi* Willd.). *Werneria pumila* var. β *parvi* Willd. ex Rockh. (Rockhausen 1939b: 310), nom. nud. pro syn., based on B-W(16430-01 — lacking original label, but det. by Willdenow).]

**DISTRIBUTION.** Ecuador (Azua, Bolívar, Cañar, Chimborazo, Cotopaxi, Imbabura, Napo, Pichincha, Tungurahua).

10. **Rockhausenia apiculata** (Sch.Bip.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300559-1

*Werneria apiculata* Sch.Bip., Bonplandia 4 (4): 52 (Schultz Bipontinus 1856). Type: ‘Meine *Werneria apiculata* kommt unter 2 Nummern von sterilnen Andenweiden vor.’ [Note: In a later list of determinations it is clear that these were *Lechler* 1737 and 1964 from Peru. Inference from Schultz Bipontinus (1856: 50 – 54) is that these were
Werneria pygmaea Gillies ex Hook. & Arn. var.

DISTRIBUTION. Argentina (Catamarca, Jujuy, La Rioja, Salta), Bolivia (Chuquisaca, Cochabamba, La Paz, Oruro, Potosí, Tarija), Peru (Ancash, Apurímac, Arequipa, Ayacucho, Cajamarca, Casco, Huancavelica, Huánuco, Junín, Lima, Moquegua, Pasco, Puno, Tacna).

Note: Freire & Ariza Espinar (2014: 224) included Rockhausenia apiculata as a synonym of Werneria pygmaea. However, there are very clear ecological preferences between the two species, R. apiculata growing in rather drier parts of the Puna and R. pygmaea occurring in peat bogs in the wetter area. Morphological differences can also clearly separate the two taxa (see Rockhausen’s key, 1939b: 280).

11. Rockhausenia lanatifolia (J.Calvo & R.I.Meneses) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300560-1

Werneria lanatifolia J.Calvo & R.I.Meneses, Phytotaxa 422 (2) 202 (2019). Type: ‘PERU. Cusco: cordillera de Vilcanota, cuenca de la laguna Sibinacocha, cerro Pumachunta, 13°50’S, 71°4’W, 4950 m, 4 April 2012, A. Palabral & al. 774 (holotype: LPB s.n.; isotype: US s.n.).’

DISTRIBUTION. Bolivia (La Paz), Peru (Cusco).

12. Rockhausenia cornea (S.F.Blake) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300561-1

Werneria cornea S.F.Blake, J. Wash. Acad. Sci. 18 (18): 497 (1928). Type: ‘Peru: Dry gravelly slopes, Punco, Dept. Huánuco, about 34 km. west of Huallanca, altitude about 4115 m., 1 Oct. 1922, Macbride & Featherstone 2477 (type no. 518903, Field Mus.; dupl. no. 1,121,767, U. S. Nat. Herb.).’ Holotype: F(518903 = [?material not yet barcoded]); isotype: US(1121767 = 00037301).

DISTRIBUTION. Peru (Ancash, Huancavelica, Junín, La Libertad, Pasco).

Note: Rockhausen (1939b: 316) placed this in the synonymy of Werneria pygmaea. However, the colour of the ray limbs (at least in herbarium specimens), and other leaf characters, would preclude that. Like Beltrán (2017), I prefer to keep the two taxa separate.

13. Rockhausenia canaliculata (Sch.Bip.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300562-1

Werneria canaliculata Sch.Bip., Bonplandia 4 (4): 52 (Schultz Bipontinus 15 Feb. 1856), p.p. Type: ‘Meine Werneria canaliculata vom Tobina hat ein sehr langes, … Dahin gehört [Lechler] Nr. 2048 und auch, in einer später Entwicklungsstufe sich befindend, [Lechler] Nr. 2111, welches mich wegen der verlangerten, …’ Syntype: Lechler 2048, G(00305798; 00305799 — the capsule material corresponds to R. pygmaea), K(000374200 — determined as ‘isolatectotype’ by Calvo in 2019, mounted with a Jameson s.n. collection), P(02088555, 02088556). Syntype: Lechler 2111, K(000527609), P. Lectotype (selected by Calvo et al. 2020a: 21): Lechler 2048, P(02088555). Note: Lechler 2111 is referable to Werneria staticifolia Sch.Bip. var. celsimosioides Wedd., q.v. = Rockhausenia staticifolia (Sch.Bip.) D.J.N. Hind.

Werneria pumila Kunth var. γ pinifolia Wedd. (Weddell 1856: 82). Type: ‘W. canaliculata Schultz Bip. in Bonplandia, ann. 1856, p. 52, pro parte.’ Type material: Lechler 2048, G(00305798; 00305799 — the capsule material corresponds to R. pygmaea), K(000374200 — mounted with a Jameson s.n. collection), P(02088555, 02088556).

DISTRIBUTION. Bolivia (La Paz), Peru (Cusco, Huancavelica, Junín, Puno).

14. Rockhausenia huascarana (J.Calvo, H.Beltrán & Trinidad) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300563-1

Werneria huascarana J.Calvo, H.Beltrán & Trinidad, Willdenovia 50 (1): 9 (Calvo et al. 2020b). Type: ‘Holotype: Peru, Ancash, Carhuaz, Huascaran National Park, quebrada Ulta, near Ulta pass,
09°07'S, 77°30'W, 4870 m a.s.l., 28 Jul 1985, D. N. Smith 11308 (USM accession no. 69998; isotype: MO n.v.).' Holotype: USM; isotype: MO.

**DISTRIBUTION.** Peru (Ancash).

15. **Rockhausenia caespitosa** (Wedd.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.orgnames:77300564-1

**Werneria caespitosa** Wedd., *Chloris Andina* 1 (3): 83 (Weddell 30 June 1856). Type: 'Hab. Pérou: Cordillères du département de Lima (Dombe); ...' Holotype: *Dombe* 964, P(02088584) — also given the ined. name of 'Werneria carioicoides Wedd.' on the larger Herb. Mus. Paris. label. Note: An additional sheet on the sheet reads 'uiucusma, para bahas en decoction. rapace,' probably referring to a use of the plant.

**Werneria caespitosa** Wedd. var. β haenkei Wedd. (Weddell 1856: 83). Syntypes: [Peru:] 'Cordilleres de Cuzco/ (Wedd.[ell]).' Bolivie.' Haenke, P(00869742) — annotated as 'Werneria Haenkei' by Schultz Bipontinus, as indicated by Weddell. Syntype: 'in locis paludosis Perou, prov. Carabaya.' *Weddell* 4753, P(02088565) — 'Werneria minima var. caespitosa Wedd. Chloris/ in locis paludosis. Perou. prov. Carabaya. /Flores alba. *Weddell* n. 4753.' Note: Although the variety was only recognised by Rockhaus, 1939b: 315) as *Rockhausenia cochlearis* (Weddell 1856: 53), non Phil. (Philippi 1873: 501) (= *D. J. N. Hind*). Type: 'In uliginosus. Cord. de Tuno. Mai 1854. *Lechler* 1710a.' Type material: P(02088539) — determined as holotype by Funk, Sept. 2011, a sheet with Schultz Bipontinus's Latin notes and an annotated *Lechler* collection label, together with a capsule which Schultz Bipontinus clearly wrote 'a' after the '1710': 02088531; 02088540 — of the 4 'specimens' on the sheet the upper rh is material of *Distichia muscoides*, barcoded as P02088541).

**NOTE.** Funk (1997b) clearly included *Rockhausenia apiculata* as a synonym of *R. pygmea*. However, there are very clear ecological preferences between the two species highlighted above, and they can be separated morphologically.
17. **Rockhausenia microphylla** (H.Beltrán & S.Leiva) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300566-1

Werneria microphylla H.Beltrán & S.Leiva, Phytotaxa 372 (4): 297 (2018: 297). Type: ‘PERU: Lima: prov. Huarochiri, distr. Chiña, Abra Anticona, 113534S, 761138W, 4877 m, 29 April, H. Beltrán, S. Castillo & M. Arakaki 7970 (holotype: USM 253391; isotypes: HAO, HUS, HUT).’ Holotype: USM(253391); isotypes: HAO, HUSA, HUT.

**DISTRIBUTION.** Bolivia (Cochabamba, La Paz), Peru (Ancash, Huancavelica, Lima, Puno).

18. **Rockhausenia glaberrima** (Phil.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300567-1

Werneria glaberrima Phil., Anales Mus. Nac. Chile, Segunda Secc., Bot. 8: 40 (Philippi 1891). Type: [Chile:] ‘Ad Linsor lecta.’ Type material: Pizarro (1960: 165) cited two collections against this name SGO44588, and SGO60590. Note: several other collections may well represent type material, although none (except the LP sheet) have the specific locality: B† (F0BN015809 — as ‘Tarapacá’), K(000527750 — as ‘Tarapacá’ — two duplicates), LP(0026206 — as ‘Linsor 19.II.1885’), US(00037305 — as ‘Tarapacá’; 00622820 — a capsule containing one capitulum from K).

**DISTRIBUTION.** Bolivia (La Paz, Oruro, Potosí), Chile (Antofagasta, Arica y Parinacota, Tarapacá).

**Rockhausenia** D.J.N.Hind subgen. **Rockhausenia** sect. **Spathulifoliae** (Rockh.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300569-1

Werneria Kunth subgen. Werneria [as Euwerneria (Gay) Rockh.] sect. Spathulifoliae Rockh., Bot. Jahrb. Syst. 70 (2): 266 (Rockhausen 18 August 1939a). Lectotype (selected here): Werneria spathulata Wedd. = **Rockhausenia spathulata** (Wedd.) D.J.N Hind

19. **Rockhausenia weberbaueriana** (Rockh.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300570-1

Werneria weberbaueriana Rockh., Bot. Jahrb. Syst. 70 (3): 323 (Rockhausen 6 Oct. 1939b). Type: ‘Peru: Cordillera Blanca bei Huarez [sic!], auf dürftig bewachsenem Steinschutt, 4300—4500 m ü. M. (A. Weberbauer Nr. 2984 – Mai 1903.). Holotype: B†. Neotype (selected by Calvo et al. 2020b: 6): ‘Peru, Ancash, Huari [Asuncion], Huascarán N.P., just crossing the Ultra pass, 4870 m asl., 09078, 7730W, 28 Jul 1985, D. N. Smith 11303 (US barcode US-00622845; isoneotypes: F accession no. 1960115, MO accession no. 331615, USM accession no. 69993).’

**DISTRIBUTION.** Peru (Ancash). Note: Beltrán (2017: 48) had previously suggested Lima, although that is considered to be through misidentification of material.

20. **Rockhausenia rockhauseniana** (H.Beltrán, Trinidad & J.Calvo) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300571-1

Werneria rockhauseniana H.Beltrán, Trinidad & J.Calvo, Willdenovia 50 (1): 7 (in Calvo et al. 2020b). Type: ‘Holotype: Peru, Ancash, Huaylas, Huascarán N.P., pass between quebrada Los Cedros and Hauarcocha, 08°51’S, 77°45’W, 4600—4800 m asl., 12 Mar 1985, D. N. Smith & R. Valencia 9950 (USM accession no. 68139; isotypes: F accession no. 1962951, LPB s.n., MO accession no. 3316189, QCNE accession no. 58168, US barcode US-00622663).’ Holotype: USM(68139); isotypes: F(1962951), LPB, MO(3316189), QCNE(58168), US(00622663).

**DISTRIBUTION.** Peru (Ancash, Lima).

21. **Rockhausenia aretioides** (Wedd.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300572-1

Werneria aretioides Wedd., Chloris Andina 1 (3): 86 (Weddell 30 June 1856). Type: ‘Hab. Bolívia: sur les montagnes des lagunas de Potosí! (d’Obligey, n° 1400).’ Holotype: P(02088552); isotype: P(02088553). Note: Freire & Ariza Espinar (2014: 221) lectotypified this name based on the same material.

Werneria minima Meyen & Walp. var. *β* pygmaea Walp. (Walpers in Meyen & Walpers 1843: 277). Type: ‘Peruvia: in planitie circa Tacoram, alt. 14—17,000 ped. (v.s.).’ Note: Although it is highly likely that the type collection was Meyen’s and originally in B, it is not at all clear if the citation, of a single collection, was just that of the species or included material of the variety mixed with it.
Werneria knocheae

http://www.ipni.org/urn:lsid:ipni.org:names:77300573-1

Werneria pectinata

http://www.ipni.org/urn:lsid:ipni.org:names:77300574-1

DISTRIBUTION. Argentina (Jujuy, Salta), Bolivia (La Paz, Oruro, Potosí), Chile (Antofagasta, Arica y Parinacota, Tarapacá), Peru (Moquegua, Tacna).

22. Rockhausenia pectinata (Lingelsh.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300575-1

Werneria ciliata Wedd. ex Sch.Bip. (Schultz Bipontinus 1866: 530), nom. nud. pro syn. (based on Mandon 99).

Werneria pectinata Lingelsh., Repert. Nov. Spec. Regni Veg. 8 (157/159): 6 (Lingelshelm 1910). Type: 'Bolivien: Am Chacaltaya, 4800 m (Buchhien, no. 1596).’ Original material: ?B or ?WRSL; isotype: US(1098581 = 00037343). Note: In the first part, solely authored by Pax, of a series of papers on new Bolivian taxa (see C. de Candolle 1911, 1914; Cogniaux et al. 1910; Lingelshelm et al. 1909a, 1909b; Pax 1908) Pax described many new taxa based on collections of 'Dr. Otto Buchtien', Miguel Bang and H. Rusby that had been made available by Dr Baenitz of the ‘botanischen Museum zu Breslau’, now known as Wrocław University (WRSL ≡ BRSL) in Poland. The location of the original material of these taxa will depend upon where these collections were finally deposited — either in WRSL or possibly in B (now destroyed — for several families), with several widely distributed isotypes of many taxa; a large set of duplicates is in US, although label collection dates are somewhat at odds with the protologues. Lingelshelm, Pax and Winkler were all staff members in the ‘Botanischen Museum zu Breslau’ which is certainly where they described the material and would most certainly be the most appropriate herbarium to cite if lectotypes were to be selected if type material still exists there; investigations still need to be undertaken.

Werneria knocheae Perkins (1913: 290). Types: ‘Bolivien: Aguila, 17° südl. Breite, 67° westl. Länge, an der Cordillera Real, 5200 m ü. M. (Edith Knoche n. 2, 14, 21. – Im April 1909 blühend).’ Syntype: Knoche 21, B(FOBN015813 — lacking a sheet label in the photograph). Note: There are no images of the other Knoche syntypes in F.

DISTRIBUTION. Bolivia (Cochabamba, La Paz, Oruro), Peru (Ancash, Arequipa, Ayacucho, Casco, Huancavelica, Junín, Lima, Moquegua, Puno).

23. Rockhausenia castroviejoi (J. Calvo & H. Beltrán) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300574-1

Werneria castroviejoi J. Calvo & H. Beltrán, Phytotaxa 408 (2) 139 (Calvo & Beltrán 2019). Type: 'PERU. Lima: [Huarochoi], límite con dpto. Junín, entre Casapalca y Ticlio, [11°35’S 76°11’W], 4840, 1 December 1977, S. Castroviejo, M. Costa & E. Valdés-Bermejo 1112 (holotype: MA 867835).’

DISTRIBUTION. Peru (Ancash, Junín, La Libertad, Lima).

24. Rockhausenia cochlearis (Griseb.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300575-1

Werneria brachypappa [as brachypappus] Phil., Anales Univ. Chile 43 (1): 501 (Philippi 1873), nom. illeg., non Sch.Bip. (Schultz Bipontinus 1856: 53) (= Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind). Type: [Chile: Antofagasta.] ‘Hallada por el señor don Guillermo Doell cerca de las salitreras de Antofagasta, en el desierto de Atacama.’ Cabrera (1948: 58) stated: ‘Salitreras de Antofagasta, leg. Doll. 1873 (Tipo: SAGO.).’ Calvo & Moreira-Muñoz (2019: 174) considered this first-step lectotypification and provided second-step lectotypification based on SGO(000006428); isolecotypes: LP(010363), SGO(000006429).

Werneria cochlearis Griseb., Symbol. Fl. Argent.: 208 (Grisebach 1879a); Abh. Königl. Ges. Wis. Göttingen 24 (1): 208 (Grisebach 1879b). Type: [Argentina:] ‘[Salta]: Nevado del Castillo.’ Types: B(FOBN015805 — L. & H [= Lorentz & Hieronymus] 114’), CORD(00006520), GOET(6285 — databased as the ‘holotype’), US(00037300). Lectotype (selected by Freire & Ariza Espinar 2014: 221): ’19/23 Mar 1873, P. G. Lorentz & G. Hieronymus 114’, CORD(00006520); isolecotype: US(280924 = 00037300). Calvo & Moreira-Muñoz (2019: 174) were of the opinion that the lectotype was selected by Cabrera (1948: 60). However, Cabrera only stated that the isotype was in CORD, and made no comment on any possible material in GOET, contrary to the suggestion by Calvo & Moriera-Muñoz (2019: 175). The material in K(00527749), whilst clearly a syntype, is unnumbered.

Wernervia denticulata S. F. Blake, Contr. U.S. Natl. Herb. 22 (8): 651 (1924), as nom. nov. pro W. brachypappa Phil.

DISTRIBUTION. Argentina (Catamarca, Jujuy, La Rioja, Salta, Tucumán).

25. Rockhausenia orbignyana (Wedd.) D.J.N.Hind, comb. nov.
http://www.ipni.org/urn:lsid:ipni.org:names:77300576-1

Werneria orbignyana Wedd., Chloris Andina 1 (3): 85 (Weddell 30 June 1856). Type: ‘Hab. BOLIVIE: au sommet de la Cordillère de La Paz! (d’Orbigny, n° 338 [sic] = ’328’ on sheet!).’ Holotype: P (00869837 - designated as ‘LECTOTYPE’ by Calvo in Sept. 2019, although cited as ‘s.n.’ in Calvo et al. 2020a: 57, the material not having been returned from loan at that point).

Werneria orbignyana Wedd. var. breviradiata A.Gray (1861: 139). Type: [Peru:] ‘High Andes of Peru, near Casa Cancha. [Wilkes s.n.]’ Holotype: GH; isotypes: K(000527755), (00037328).

Werneria nudula A.Gray, Proc. Amer. Acad. Arts 5: 139 (1861), nom. nud. (based on the type of W. orbignyana var. breviradiata).

Werneria mandoniana Sch.Bip., Bull. Soc. Bot. France 12: 80 (Schultz Bipontinus 1865), nom nud. (based on Mandon 102).

Werneria pygmaea Gillies ex Hook. & Arn. var. rhodopappa Phil., Anales Mus. Nac. Chile, Segunda Sec., Bot. 8: 41 (Philippi 1891). Type: [Chile: Antofagasta] ‘De Machuca 3200 m. s. m. [17 Feb. 1885], pappus pulcherrime roseus.’ Lectotype (selected by Calvo & Moreira-Muñoz 2019: 174): SGO (000006435); isolectotype: SGO (000006442).

Werneria mandoniana Wedd. ex Klatt (1894: 367). Type: [Bolivia:] ‘Hab.: Prov. Larecaya, vicinii Sorata, valle inter las trincheras de Chilliata et montem Hlampie, in scopulosis, Alt. Reg. alpina, 3800 m., leg. Mandon, Sept. 1858, Nr. 102.’ Type material: B(FOBN015816), BR(5531547), G(00305793, 00305794), K(000527754), P(00711470, 04318256), S-R-6524, US(1706004 = 00037324, 1803309 = 00037325). Note: The locality referred to by Klatt is written by Mandon as ‘Valle inter las Trincheras de Chilliata et montem Illampu, in scopulosis ...’. Illampu (6368 m) is the fourth highest peak in Bolivia. Whilst there is a Laguna Chilliata (4235 m), NE of Illampu, there is no modern reference to La Trincheras de Chilliata (or Chilliata).

Werneria orbignyana Wedd. var. longifolia Rockh., Bot. Jahrb. Syst. 70 (3): 331 (Rockhausen 1939b). Type: ‘Peru: Departm. Lima, Antaicocha, Cerro Colorado, östlich Canta, offene sandige Hänge, 4000–4100 m ü. M. (Fr. W. PENNELL Nr. 14690 – Juni 1925.) Typus’! Note: Rockhausen (1939b: 331) did not state where the type was located, nor whether he had seen any of the other duplicates. Type material: F (558651), GH (009361610), NY(04241910), PH(00348278), US(00622825). Lectotype (selected by Calvo et al. 2020a: 57): PH(00348278).

DISTRIBUTION. Bolivia (Cochabamba, La Paz, Oruro), Chile (Antofagasta, Arica y Parinacota, Tarapacá), Peru (Ancash, Arequipa, Ayacucho, Cajamarca, Cusco, Huancavelica, Junín, Lima, Moquegua, Puno, Tacna).

26. Rockhausenia spathulata (Wedd.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300577-1

Werneria spathulata Wedd., Chloris Andina 1 (3): 85 (Weddell 30 June 1856). Type: ‘Hab. BOLIVIE: partie supérieure du ravin de Chuquiaguillo, dans les pelouses un peu tourbeuses de la Lancha!, Cordillère de La Paz (Wedd.’). Holotype: P(02088537); isotype: P(02088538). Type material: P(02088537; 02088538 — a capsule containing 2 separate portions of flowering stem and a separate leaf). Lectotype (selected by Freire & Ariza Espinar 2014: 224): P(02088537 — det. by Funk 2011, as the holotype).

DISTRIBUTION. Argentina (Jujuy, Salta, Tucumán), Bolivia (La Paz, Oruro, Potosí), Chile (Antofagasta, Arica y Parinacota, Tarapacá), Ecuador (Napo), Peru (Arequipa, Huacavelica, Lima, Moquegua, Puno, Tacna).

27. Rockhausenia glandulosa (Wedd.) D.J.N.Hind, comb. nov.

http://www.ipni.org/urn:lsid:ipni.org:names:77300578-1

Werneria glandulosa Wedd., Chloria Andina 1 (3): 85 (Weddell 30 June 1856). Type: [Hab. PÉROU: fentes des rochers, dans les Cordillères de Carabaya! (Wedell']]. Holotype: P(02088561 — the pre-printed label reads ‘AMERIQ. MÉRITÉ’. Pérou; prov. de CARABAYA. Juin–Juillet 1847/ M. H. Alg. WEDDELL, 1848./ Cat. prop. N°;’, and in Weddell’s hand ‘4738’), a single plant mounted on the sheet with 2 small leaf fragments in a capsule). Lectotype (selected by Calvo et al. 2020a: 33): P(02088561). Epitype (selected by Calvo et al. 2020a: 33): ‘Peru. Cusco Paucaartamo, Parque Nacional del Manu, Acjanaco, cerro Inanbari [Inambari], 3,850 m, 21 Mar 1992, A. Cano 5241 (USM-107649).’

DISTRIBUTION. Bolivia (La Paz), Peru (Cusco, Puno).

NOTE. As this species is still relatively poorly illustrated, bar the colour images provided by Alfredo Fuentes (LPB) to Calvo et al. (2020a), which he also provided to me after my earlier study visit in 2015, I have provided a black and white line illustration to allow some of the critical details to be seen, and comparison made with similar species — see Fig. 1.
Fig. 1. Rockhausenia glandulosa. A habit of flowering plant; B abaxial view of leaf; C detail of leaf hair; D capitulum; E l.s. capitulum, showing fistulose scape apex beneath receptacle; F phyllaries; G detail of apex of scape bract; H ray floret; J detail of style arms of ray floret; K disc floret corolla opened out showing attachment point of filaments; L side view of disc floret corolla lobe; M detail of style arms of disc floret; N stamen; P achene and base of pappus setae; Q detail of apex of pappus seta. All from Fuentes et al. 12607 (LPB). DRAWN BY HAZEL WILKS.
Two new combinations in Werneria
In maintaining all xenophyllums as wernerias, new combinations are required for the following two species:

Werneria funkiana (J. Calvo) D. J. N. Hind, comb. nov.  

http://www.ipni.org/urn:lsid:ipni.org:names:77300579-1

Xenophyllum funkianum J. Calvo, Phytokeys 139: 30 (in Calvo & Funk 2020). Type: ‘Ecuador. Chimborazo: Mt. Chimborazo area, at the end of Polylepis road and beginning of hike to Polylepis forest, 1°31’50”S, 78°52’55”W, 4233 m, 20 Apr 2018, Y. A. Funk & J. M. Bonifacio 14059 (holotype: US!; isotypes: MO!, QCA!).’ Holotype: US; isotypes: MO, QCA.

DISTRIBUTION. Ecuador (Bolivar, Chimborazo).

Werneria lorochaqui (J. Calvo & V. A. Funk) D. J. N. Hind, comb. nov.  

http://www.ipni.org/urn:lsid:ipni.org:names:77300580-1

Xenophyllum lorochaqui J. Calvo & V. A. Funk, Phytokeys 139: 34 (2020). Type: ‘Argentina. Catamarca: El Cajón, Negroara, [26°24’S, 66°22’W], 15 Jan 1914, L. Catillon 3365 (holotype: LIL-26677!; isotypes: BM s.n!, BR s.n., US barcode 00622893!, W-334!).’ Holotype: LIL(26677); isotypes: BM, BR, US(00622893), W. Note: The number provided by Calvo & Funk (2020: 34) for the isotype in W is too small to be either an accession or barcode number, with or without any missing zeros.

DISTRIBUTION. Argentina (Catamarca, Jujuy, Salta, Tucumán).

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Declarations
Conflict of interest. The author declares no conflict of interest.

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Index to names pertinent to *Anticona, Misbrookea, Rockhausenia and Werneria*

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Senecio pfisteri Ricardi & Martic., Greyna, Bot. 11: 25 (Ricardi & Marticorena 1964) = Werneria esquilachensis Cuatrec.

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Werneria acicularis A.Gray ex Rockh., Bot. Jahrb. Syst. 70 (3): 315 (Rockhausen 6 Oct. 1939b), nom. nud. = Rockhausenia caespitosa (Wedd.) D.J.N.Hind

Werneria africana Oliv. & Hiern, Fl. Trop. Afr. 3: 422 (Oliver & Hiern 1877) = Senecio nanus Sch.Bip. ex A.Rich.

Werneria ambydactyla S.F.Blake, J. Wash. Acad. Sci. 18 (18): 490 (1928).

Werneria antinorii Avetta, Nuovo Giorn. Bot. Ital. 21 (2): 348 (1889) = Euryops antinorii (Avetta) S.Moore

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Werneria aquatica J.Calvo, Phytotaxa 408 (2): 137 (in Calvo & Beltran 2019) = Senecio breviscapus DC.

Werneria arctioides Wedd., Chloris Andina 1 (3): 86 (Weddell 30 June 1856) = Rockhausenia arctioides (Wedd.) D.J.N.Hind

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Werneria borignyana Kunze, Revis. Gen. Pl. 3[3]: 184 (1898) = Misbrookea strigosissima (A.Gray) V.A.Funk
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Werneria brachypappa (as brachypappus) Phil., Anales Univ. Chile 43 (1): 501 (Philippi 1873) = Rockhausenia cochlearis (Griseb.) D.J.N.Hind

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Werneria canaliculata Sch.Bip., Bonplandia 4 (4): 52 (Schultz Bipontinus 15 Feb. 1856) = Rockhausenia canaliculata (Sch.Bip.) D.J.N.Hind

Werneria carnulosa A.Gray, Proc. Amer. Acad. Arts 5: 140 (1861) = Rockhausenia carnulosa (A.Gray) D.J.N.Hind

Werneria castroviejoi J.Calvo & H.Beltrán, Phytotaxa 408 (2) 139 (2019) = Rockhausenia castroviejoi (J.Calvo & H.Beltrán) D.J.N.Hind

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Werneria caulescens (Wedd.) Hieron., Bot. Jahrb. Syst. 21 (4): 363 (Hieronymus 1895) = Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

Werneria caulescens (Wedd.) Rusby, Bull. New York Bot. Gard. 4 (14): 398 (1907) = Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

Werneria celmsioideae Sch.Bip. ex Wedd., Chloris Andina 1 (3): 82 (Weddell 30 June 1856) = Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

Werneria cherlerioides Sch.Bip. ex Wedd., Chloris Andina 1 (3): 84 (Weddell 30 June 1856), nom. nud. pro syn., pp. (based on Lechler 1710 a) = Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria cherlerioides Sch.Bip. ex Rockh., Bot. Jahrb. Syst. 70(3): 283 (Rockhausen 6 Oct. 1939b), nom. nud. pro syn., pp. (based on Lechler 1710 b) = Rockhausenia solifovia (Sch. Bip.) D.J.N.Hind

Werneria ciliata Wedd. ex Sch.Bip., Linnaea 34 (5): 530 (Schultz Bipontinus Feb. 1866) = Rockhausenia pectinata (Lingesh.) D.J.N.Hind

Werneria ciliolata A.Gray, Proc. Amer. Acad. Arts 5: 140 (1861).

Werneria cochlearis Griseb., Symbol. Fl. Argent.: 208 (Grisebach 1879a); Abb. Königl. Ges. Wiss. Göttingen 24 (1): 208 (Grisebach 1879b) = Rockhausenia cochlearis (Griseb.) D.J.N.Hind

Werneria cornea S.F.Blake, J. Wash. Acad. Sci. 18 (18): 497 (1928) = Rockhausenia cornea (S.F.Blake) D.J.N.Hind

Werneria cortexifolia Griseb., Abh. Königl. Ges. Wiss. Göttingen 19 (1): 194 (Grisebach 1874); Pl. Lorentz.: 146 (Grisebach 1874) = Senecio breviscapus DC.

Werneria crassa S.F.Blake, J. Wash. Acad. Sci. 18 (18): 495 (1928).

Werneria crassa S.F.Blake subsp. orientalis Cuatrec., Phytologia 45 (1): 29 (Cuatrecasas 1980).

Werneria dactylophylla Sch.Bip., Bonplandia 4 (4): 53 (Schultz Bipontinus 1856).

Werneria dactylophylla Sch.Bip. f. glabriuscula Rockh., Bot. Jahrb. Syst. 70 (3): 286 (Rockhausen 6 Oct. 1939b) = Werneria dactylophylla Sch.Bip.

Werneria dactylophylla Sch.Bip. var. glandulosos-denticulata Rockh., Bot. Jahrb. Syst. 70 (3): 286 (Rockhausen 6 Oct. 1939b) = Werneria dactylophylla Sch.Bip.

Werneria decorata S.F.Blake, J. Wash. Acad. Sci. 19 (18): 491 (1928).

Werneria decumbens Hieron., Bot. Jahrb. Syst. 21 (3): 364 (Hieronymus 1895) = Werneria weddellii Phil.

Werneria densa Benthi., Pl. Hartweg: 211 (Bentham mid-Nov. 1845) = Rockhausenia pumilla (Kunth) D.J.N.Hind

Werneria denticulata S.F.Blake, Cons. U. S. Natl. Herb. 22 (8): 651 (1924) = Rockhausenia cochlearis (Griseb.) D.J.N.Hind

Werneria digitata Wedd., Chloris Andina 1 (3): 85 (Weddell 30 June 1856).

Werneria digitata Wedd. var. lanata Rockh., Bot. Jahrb. Syst. 70 (3): 287 (Rockhausen 6 Oct. 1939b) = Werneria digitata Wedd.

Werneria disticha Kunth, in Humb., Bonpl. & Kunth, Nova Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 151 (1818) = Rockhausenia nubigena (Kunth) D.J.N.Hind

Werneria donbeyana (Wedd.) Hieron., Bot. Jahrb. Syst. 21 (3): 363 (Hieronymus 1895) = Rockhausenia villosa (A.Gray) D.J.N.Hind

Werneria ellisi Hook.f., Fl. Brit. India 3: 357 (Hooker 1881) = Cremanthodium ellisi (Hook.f.) Kitam.

Werneria esquischensis Cuatrec., Brittonia 8 (3): 192 (Cuatrecasas 1956).

Werneria foudii Cuatrec., Trav. Mus. Nac. C. Nat., ser. Bot. 29: 42 (Cuatrecasas 1935a) = Werneria humilis Kunth

‘Werneria frigida’ Kunth in DC., Prodr. 6: 323 (de Candolle early Jan. 1838), sphalm. pro Werneria rigida = Werneria rigida Kunth

Werneria funkiana (J.Calvo) D.J.N.Hind

Werneria glandulosa Phil., Anales Mus. Nac. Chile, Segunda Secc., Bot. 8: 40 (Philippi 1891) = Rockhausenia glandulosa (Phil.) D.J.N.Hind

Werneria glandulosa Wedd., Chloris Andina 1 (3): 85 (Weddell 30 June 1856) = Rockhausenia glandulosa (Wedd.) D.J.N.Hind

Werneria glandulosa Klatt, Bot. Jahrb. Syst. 8 (1): 50 (1887), nom. nov. pro Werneria lehmannii Klatt = Hypochaeris sessilifolia Kunth [LACTUCEAE]

Werneria glareophila Cuatrec., Anales Esc. Nac. C. Biol. (Mexico City) 18 (1 – 4): 10 (Cuatrecasas 1970) = Anticoma glareophila (Cuatrec.) E.Linares, J.Campos & A.Galán

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Werneria graminifolia Kunth in Humb., Bonpl. & Kunth,
Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 148 (1818) =
Rockhausenia graminifolia (Kunth) D.J.N.Hind

Werneria haenkei Sch.Bip. ex Wedd., Chloris Andina 1
(3): 83 (Weddell 30 June 1856), nom. nud. =
Rockhausenia caespitosa Wedd.

Werneria heteroloba Wedd., Chloris Andina 1 (3): 88
(Weddell 30 June 1856) = Rockhausenia pinnatifida
(J.Rey) D.J.N.Hind

Werneria heteroloba Wedd. f. microcephala Rockh.,
Bot. Jahrb. Syst. 70 (3): 283 (Rockhausen 6 Oct. 1999b) =
Rockhausenia pinnatifida (J.Rey) D.J.N.Hind

Werneria heteroloba Wedd. var. obtusiloba (S.Blake) Rockh.,
Bot. Jahrb. Syst. 70 (3): 283 (Rockhausen 6 Oct. 1999b) =
Rockhausenia pinnatifida (J.Rey) D.J.N.Hind

Werneria huascarana J.Calvo, H.Beltrán & Trinidad,
Wildendowia 50 (1): 9 (2020b) = Rockhausenia
huascarana (J.Calvo, H.Beltrán & Trinidad)
D.J.N.Hind

Werneria humilis Kunth in Humb., Bonpl. & Kunth,
Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 150 (1818); 4
(ed. quarto): 191 (1820).

Werneria humilis Kunth f. articulata (S.Blake) Rockh.,
Bot. Jahrb. Syst. 70 (3): 294 (Rockhausen 6 Oct.
1999b) = Werneria humilis Kunth

Werneria humilis Kunth var. fontii Cuatrec., Trab.
Mus. Nac. Ci. Nat., Serr. Bot. 27: Cuadro 22 (Cuatrecasas
1934), nom. nud. = Werneria humilis Kunth

Werneria humilis Kunth var. lindenii Wedd., Chloris
Andina 1 (3): 82 (Weddell 30 June 1856) =
Werneria humilis Kunth

Werneria humilis Kunth var. rosea (Hieron.) Rockh.,
Bot. Jahrb. Syst. 70 (3): 295 (Rockhausen 6 Oct. 1999b) =
Werneria rosea Hieron.

Werneria incisa Phil., Anales Mus. Nac. Chile, Segunda
Secc., Bot. 8: 41 (1891).

Werneria incisa Phil. var. pulexens Rockh., Bot.
Jahrb. Syst. 70 (3): 290 (Rockhausen 1999b) = Werneria poposa Phil.

Werneria juniperina Hieron., Bot. Jahrb. Syst. 21 (4): 365
(Hieronymus 1895).

Werneria knoxii Perkins, Bot. Jahrb. Syst. 49 (2): 290 (1913) =
Rockhausenia pectinata (Lingelsh.) D.J.N.Hind

Werneria lanatolatia J.Calvo & R.I.Meneses, Phytotaxa
422 (2): 202 (2019) = Rockhausenia lanatolatia
(J.Calvo & R.I.Meneses) D.J.N.Hind

Werneria lechleri Lechler., Berberid. Amer. Austr.
(Addendum: Enum. pl. amer. austral.), 57 (Lechler 1857),
nom. nud., based on Lechler 2470 (type of Vernonia lechleriSch.Bip.) =
Piptocarpa lechleri (Sch.Bip.) Baker [VERNINEAE]

Werneria lechleri Sch.Bip. ex Klatt, Leptoldina 25: 108 (1889),
nom. nud., based on Lechler 2803 = Piptocarpa lechleri
(Sch.Bip.) Baker [VERNINEAE]

Werneria lehmannii Hieron., Bot. Jahrb. Syst. 28 (5): 647
(Hieronymus 1901) = Werneria humilis Kunth

Werneria lehmannii Klatt, Ann. K. K. Naturhist. Hofmus. 9
(3): 368 (1894) = Rockhausenia glandulosa (Klatt)
D.J.N.Hind

Werneria leucobryoides S.F.Blake, J. Wash. Acad. Sci.
18 (18): 493 (1928) = Werneria sotarensis Hieron.

Werneria lorentziana Hieron., Bot. Jahrb. Syst. 21 (3): 364
(Hieronymus 1895) = Werneria poposa Phil.

Werneria lorochaqui (J.Calvo & V.A.Funk) D.J.N.Hind

Werneria leptopodioides S.F.Blake, J. Wash. Acad. Sci.
18 (18): 493 (1928) = Werneria juniperina Hieron.

Werneria machridei Cuatrec., Collect. Bot. (Barcelona) 3
(3): 294 (Cuatrecasas 1953b) = Senecio hyoseridis
(Benth.) L.Salmon & S.E.Freire

Werneria macridei Cuatrec. f. microcephala Cuatrec.,
Collect. Bot. (Barcelona) 3 (3): 295 (Cuatrecasas 1953b) =
Senecio hyoseridis (Benth.) L.Salmon & S.E.Freire

Werneria mandoniana Sch.Bip., Bull. Soc. Bot. France 12:
80 (Schultz Bipentinus 1865), nom. nud. =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria mandoniana Wedd. ex Klatt, Ann. K. K.
Naturh. Hofmus. Wien 9 (3): 367 (1894) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria marceda S.F.Blake, J. Wash. Acad. Sci. 18 (18):
492 (1928).

Werneria melanandra Wedd., Chloris Andina 1 (3): 88
(Weddell 30 June 1856) = Senecio melanandrus
(Wedd.) J.Calvo, A.Granda & V.A.Funk

Werneria microphylla H.Beltrán & S.Leiva, Phytotaxa
372 (4): 297 (2018) = Rockhausenia microphylla
(H.Beltrán & S.Leiva) D.J.N.Hind

Werneria minima Meyen & Walp., Nov. Actores Acad.
Caes. Leop.-Carol. Nat. Cur. 19 (Suppl. 1)
[Observaciones Botanicas]: 277 (Meyen & Walpers
1843) = Rockhausenia pygmaea (Gillies ex Hook. &
Arn.) D.J.N.Hind

Werneria minima Meyen & Walp. var. pygmaea Walp., Nov.
Actores Acad. Caes. Leop.-Carol. Nat. Cur. 19 (Suppl.
1)[Observaciones Botanicas]: 277 (Meyen & Walpers
1843) = Rockhausenia aretioides (Wedd.) D.J.N.Hind

Werneria mucinniana DC., Prodr. 6: 324 (de Candolle early
Jan. 1838) = Rockhausenia nubigena (Kunth) D.J.N.Hind

Werneria nana Benth. & Hook. f., Gen. Pl. 2 (1): 451
(Bentham & Hooker 1873), nom. inval. =
Cremadnthodium nannum (Deene.) W.W.Sm.

Werneria nana Benth. & Hook. f. ex C.B.Clark, 
Compositae Ind.: 210 (1876) = Cremadnthodium
nannum (Deene.) W.W.Sm.

Werneria nubigena Kunth in Humb., Bonpl. & Kunth,
Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 151 (1818) =
Rockhausenia nubigena (Kunth) D.J.N.Hind

Werneria nubigena Kunth var. caulescens Wedd., Chloris
Andina 1 (3): 81 (Weddell 30 June 1856) =
Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

Werneria nubigena Kunth var. caulescens Wedd. subvar. 
erioscapa Wedd., Chloris Andina 1 (3): 81 (Weddell 30 June
1856) = Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

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Werneria plantaginifolia

Kunth in Humb., Bonpl. & Kunth, Choloris Andina 1 (3): 81 (Weddell 30 June 1856) =
Rockhausenia villosa (A.Gray) D.J.N.Hind

Werneria rubigna Kunth var. graminifolia (Kunth) Wedd., Choloris Andina 1 (3): 81 (Weddell 30 June 1856) =
Rockhausenia graminifolia (Kunth) D.J.N.Hind

Werneria rubigna Kunth var. latifolia Wedd., Choloris Andina 1 (3): 80 (Weddell 30 June 1856) =
Rockhausenia rubigna (Kunth) D.J.N.Hind

Werneria rubigna Kunth var. vulgaris Wedd., Choloris Andina 1 (3): 80 (Weddell 30 June 1856) =
Rockhausenia rubigna (Kunth) D.J.N.Hind

Werneria nuda A.Gray, Proc. Amer. Acad. Arts 5: 139 (1861) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria obtusifolia S.F.Blake, J. Wash. Acad. Sci. 18 (18): 489 (1928) =
Rockhausenia pinnatifida (J.Rémy) D.J.N.Hind

Werneria obtusifolia Wedd., Choloris Andina 1 (3): 85 (Weddell 30 June 1856) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria obtusifolia Wedd. var. brevifolia A.Gray, Proc. Amer. Acad. Arts 5: 139 (1861) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria orbignyana Wedd. var. longifolia Rockh., Bot. Jahrb. Syst. 70 (3): 331 (Rockhausen 6 Oct. 1939b) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria pectinata Lingelsh., Repert. Nov. Spec. Regni Veg. 8 (157/159): 6 (Lingelshelm 1910) =
Rockhausenia pectinata (Lingelsh.) D.J.N.Hind

Werneria pinnatifida J.Rémy, Fl. Chilena (Gay) 4 (2): 216 (1849) =
Rockhausenia pinnatifida (J.Rémy) D.J.N.Hind

Werneria plantaginifolia Wedd. ex Klatt, Ann. K. K. Naturh. Hofmus. Wien 9 (3): 376 (1894) =
Rockhausenia plantaginifolia (Klatt) D.J.N.Hind

Werneria plantaginifolia Wedd. ex Klatt var. macrocephala Cuatrec., Feddes Repert. Spec. Nov. Regni Veg. 55 (2 – 3): 153 (Cuatrecasas 1939a) =
Rockhausenia plantaginifolia (Klatt) D.J.N.Hind

Werneria poposa Phil., Anales Mus. Nac. Chile, Segunda Sec., Bot. 1891: 40 (Filippi 1891).

Werneria pseudodigita Rockh., Bot. Jahrb. Syst. 70 (3): 288 (Rockhausen 6 Oct. 1939b).

Werneria pulvina Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 148 (1818) =
Rockhausenia pulvina (Kunth) D.J.N.Hind

Werneria pulvina Kunth var. graminifolia Wedd., Choloris Andina 1 (3): 82 (Weddell 30 June 1856) =
Rockhausenia pulvina (Kunth) D.J.N.Hind

Werneria pulvina Kunth var. subbathulata Wedd., Choloris Andina 1 (3): 82 (Weddell 30 June 1856) =
Rockhausenia pulvina (Kunth) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn., J. Bot. (Hooker) 3: 348 (Hooker & Arnott 1841) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. apiculata (Sch.Bip.) Wedd., Choloris Andina 1 (3): 84 (Weddell 30 June 1856) =
Rockhausenia pygmaea (Sch.Bip.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. caespitosa Wedd., Choloris Andina 1 (3): 84 (Weddell 30 June 1856) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. cylindrica Cuatrec., Anales Ci. Univ. Madrid. 4 (2): 245 (Cuatrecasas 1935b) =
Senecio gamelepis Cabrera

Werneria pygmaea Gillies ex Hook. & Arn. var. iodepappra Wedd., Choloris Andina 1 (3): 84 (Weddell 30 June 1856) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. proemorsa Wedd., Choloris Andina 1 (3): 84 (Weddell 30 June 1856) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. psychrophila Wedd. ex Sch.Bip., Bull. Soc. Bot. France 12: 80 (Schultz Bipontinus 1865) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria pygmaea Gillies ex Hook. & Arn. var. rhodopappa Phil., Anales Mus. Nac. Chile, Segunda Sec., Bot. 8: 41 (1891) =
Rockhausenia orbignyana (Wedd.) D.J.N.Hind

Werneria pygmaea S.F.Blake, J. Wash. Acad. Sci. 18 (18): 491 (1928) =
Senecio pygmonphyllus (S.F.Blake) J.Calvo, A.Granada & VA.Funk

Werneria rhizoma J.Rémy, Fl. Chilena (Gay) 4: 215 (1849) =
Rockhausenia pygmaea (Gillies ex Hook. & Arn.) D.J.N.Hind

Werneria rigidia Kunth in Humb., Bonpl. & Kunth, Nov. Gen. Sp. Pl. 4 (ed. folio, fasc. 16): 149 (1818).

Werneria rockhausiana H.Beltrán, Trinidad & J.Calvo, Wildenowia 50 (1): 7 (in Calvo et al. 2020b) =
Rockhausenia rockhausiana (H.Beltrán, Trinidad & J.Calvo) D.J.N.Hind

Werneria roseni R.E.Fr., Nova Acta Regiae Soc. Sci. Upsal., ser. 4, 1 (1): 90 (Fries 1905).

Werneria rosea Hieron., Bot. Jahrb. Syst. 28 (5): 648 (Hieronymus 11 Jan. 1901).

Werneria sedoides S.F.Blake, J. Wash. Acad. Sci. 18 (18): 493 (1928) =
Werneria marcidia S.F.Blake

Werneria setosa Wedd. ex Sch.Bip., Linnaea 34 (5): 530 (Schultz Bipontinus Feb. 1866), nom. nud. pro syn. =
Mishbrookea strigosissima (A.Gray) VA.Funk

Werneria solivifolia [as solivaefolia] Sch.Bip., Bonplandia 4 (4): 53 (Schultz Bipontinus 1865) =
Rockhausenia solivifolia (Sch.Bip.) D.J.N.Hind

Werneria sotarensis (as soratensis) Hieron., Bot. Jahrb. Syst. 21 (3): 363 (Hieronymus 1895).
Werneria spathulata Wedd., Chloris Andina 1 (3): 85 (Weddell 30 June 1856) = Rockhausenia spathulata (Wedd.) D.J.N.Hind

Werneria staffordiae Sandwith, Hooker’s Icon. Pl., ser. 5, 5 [vol. 35 of whole work]: tab. 3424 – pp. 1 – 2 (1940)

Werneria staticifolia [as staticaefolia] Sch.Bip., Bonplandia 4 (4): 53 (Schultz Bipontinus 15 Feb. 1856) = Rockhausenia staticifolia (Sch.Bip.) D.J.N.Hind

Werneria staticifolia Sch.Bip. var. nubigena (Kunth) D.J.N.Hind

Werneria stilbella (as stübelii) Hieron., Bot. Jahrb. Syst. 5: 140 (1861) = Mishbrookea strigissima (A.Gray) V.A.Funk

Werneria stilbella (as stübelii) Hieron., Bot. Jahrb. Syst. 21 (4): 362 (Hieronymus 1895) = Rockhausenia nubigena (Kunth) D.J.N.Hind

Werneria villosa A.Gray, Proc. Amer. Acad. Arts 5: 140 (1861) = Rockhausenia villosa (A.Gray) D.J.N.Hind

Werneria weberbaueriana Rockh., Bot. Jahrb. Syst. 70 (3): 323 (Rockhausen 6 Oct. 1939b) = Rockhausenia weberbaueriana (Rockh.) D.J.N.Hind

Werneria weddellii Phil., Anales Mus. Nac. Chile, Segunda Secc., Bot. 8: 40 (Philippi 1891).

Werneria wernerioides Werneria amblydactyla (Hieron.) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria amblydactyla (Hieron.) D.J.N.Hind

Xenophyllum amblydactylum (S.F.Blake) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria amblydactyla S.F.Blake

Xenophyllum ciliolatum (A.Gray) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria ciliolata A.Gray

Xenophyllum crassum (S.F.Blake) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria crassula S.F.Blake

Xenophyllum crassum (S.F.Blake) V.A.Funk subsp. crassum, Novon 7 (3): 235 (1997c) = Werneria crassula S.F.Blake

Xenophyllum decorum (S.F.Blake) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria decorum S.F.Blake

Xenophyllum digitatum (Wedd.) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria digitata Wedd.

Xenophyllum esquilachense (Cuatrec.) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria esquilachensis Cuatrec.

Xenophyllum fontii (Cuatrec.) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria humilis Kunth

Xenophyllum funkianum J.Calvo, PhytoKeys 139: 30 (in Calvo & Funk 2020) = Werneria funkiana (J.Calvo) D.J.N.Hind

Xenophyllum humile (Kunth) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria humilis Kunth

Xenophyllum incisum (Phil.) V.A.Funk, Novon 7 (3): 235 (1997c) = Werneria incisa Phil.

Xenophyllum incisum (Phil.) V.A.Funk var. pubescens (Rockh.) Cabrera & S.E.Freire, Monogr. Syst. Bot. Missouri Bot. Gard. 74 (2): 1245 (1999) = Werneria poposa Phil.

Xenophyllum juniperinum (Hieron.) J.Calvo, Phytokeys 326 (3): 228 (in Calvo et al. 2017) = Werneria juniperina Hieron.

Xenophyllum lorochaqui J.Calvo & V.A.Funk, Novon 7 (3): 235 (in Funk 1997c) = Werneria lorochaqui (J.Calvo & V.A.Funk) D.J.N.Hind

Xenophyllum nubigena (Kunth) V.A.Funk var. celmisioides (Hieron.) J.Calvo & V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria nubigena Hieron.

Xenophyllum poposum (as poposum) (Phil.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria poposa Phil.

Xenophyllum pseudodigitatum (Rockh.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria pseudodigitata Rockh.

Xenophyllum roseum (R.E.Fr.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria roseum R.E.Fr.

Xenophyllum rosenii (R.E.Fr.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria rosenii R.E.Fr.

Xenophyllum roseum (Hieron.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria rosea Hieron.

Xenophyllum sotarensis (Hieron.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria sotarensis Hieron.

Xenophyllum staffordiae (Sandwith) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria staffordiae Sandwith

Xenophyllum weddellii (Phil.) V.A.Funk, Novon 7 (3): 240 (1997c) = Werneria weddellii Phil.

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