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# MISPLACED *GAMOCHAETA* WEDD. (GNAPHALIINAE, GNAPHALIEAE, ASTERACEAE) FROM THE ANDEAN CORDILLERA

GAMOCHAETA *WEDD. (GNAPHALIINAE, GNAPHALIEAE, ASTERACEAE) DE LA CORDILLERA DE LOS ANDES TAXONÓMICAMENTE MAL UBICADAS*

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**ABSTRACT**

In preparation of a monograph for *Mniodes* (A. Gray) Benth. and after reviewing the Gnaphaliinae Dumortin herbaria from Bolivia, Chile, Colombia, Ecuador, Peru and United States, some misplaced species are reviewed. *Gamochaeta* Wedd. and *Mniodes* (including *Luciliocline* Anderb. & Freire) are Andean genera with high-elevation members (>3500 m.a.s.l.) and are often difficult to distinguish due to superficial similarity. *Mniodes pickeringii* (A. Gray) S.E. Freire, Chemisquy, Anderb. & Urtubey is rejected from *Mniodes* and transferred as ***Gamochaeta pickeringii* (A. Gray) M.O. Dillon & Quip.** based on its overall vegetative morphology, phyllary shape and coloration, and achenial (or cypselae) trichomes. A misinterpreted Bolivian species, *Merope virescens* Wedd., hasbeen treated as a synonym of *Mniodes schultzii* (Wedd.) S.E. Freire, Chemisquy, Anderb. & Urtubey and here is rejected from *Mniodes* and transferred as ***Gamochaeta virescens* (Wedd.) M.O. Dillon & Quip.** Finally, an Ecuadorian species,

*Lucilia subspicata* var. *microcephala* Hieron., has been treated as a synonym under *Mniodes subspicata* (Wedd.) S.E. Freire, Chemisquy, Anderb. & Urtubey. After examination of the type, it is recognized as *Gamochaeta humilis* Wedd. and rejected from the synonymy of *Mniodes*.

**Keyword**: Andean Gnaphaliinae, *Gamochaeta*, *Mniodes*, new combinations, synonyms, floras of Argentina,Bolivia, Ecuador, Peru.

**RESUMEN**

Durante la preparación de una monografía de *Mniodes* (A.Gray) Benth. y después de revisar Gnaphaliinae Dumort en herbarios de Bolivia, Chile, Colombia, Ecuador, Perú y Estados Unidos, se analizan algunas especies hoy mal ubicadas y mal comprendidas. *Gamochaeta* Wedd. y *Mniodes* (incluido *Luciliocline* Anderb. & Freire) son dos géneros andinos con miembros que habitan a elevadas altitudes (>3500 m s,m,) y son difíciles de distinguir debido su similitud superficial. Se excluye a *Mniodes pickeringii* (A. Gray) S.E. Freire, Chemisquy, Anderb. & Urtubey de *Mniodes* y se transfiere a ***Gamochaeta pickeringii* (A. Gray) M.O. Dillon & Quip.** basado en la morfología vegetativa general, forma y coloración de las filarias, y tricomas del aquenio (o cipsela). *Merope virescens* Wedd., especie boliviana mal interpretada y tratada como sinónimo de *Mniodes schultzii* (Wedd.) S.E. Freire, Chemisquy, Anderb. & Urtubey aquí se excluye de *Mniodes* y se transfiere a ***Gamochaeta virescens* (Wedd.) M.O. Dillon & Quip.** Finalmente, *Lucilia subspicata* var. *microcephala* Hieron. especie ecuatoriana tratada como sinónimo de *Mniodes subspicata* (Wedd.) S.E. Freire, Chemisquy, Anderb. & Urtubey., luego del análisis del tipo, se reconoce como *Gamochaeta humilis* Wedd. y se rechaza de la sinonimia de *Mniodes*.

**Palabras clave**: Gnaphaliinae andino, *Gamochaeta*, *Mniodes*, nuevas combinaciones, sinónimos, floras de Argentina, Bolivia, Ecuador, Perú.

## INTRODUCTION

Over the last decade, our understanding of generic boundaries in the Gnaphaliinae Dumort has improved and characters of the achenes (also termed cypselae) have been shown to reflect putative phylogeny (Luebert et al., 2017). Many high-elevation Andean genera in the *Lucilia*-group (Gnaphaliinae, Gnaphalieae, Asteraceae) have converged on a common lifeform with canescent or gray-colored, highly reduced, cushionform plant habits (Dillon, 2005). Some species of *Gamochaeta* Wedd. and *Mniodes* (A. Gray) Benth. (Including *Luciliocline* Anderb. & Freire) look alike in nature. Not examining characters such as achenial trichomes can lead to misidentifications in herbarium material and the wrong generic placements of described species. Hence the purpose of this manuscript is to clarify the generic identity of some Andean species previously misplaced

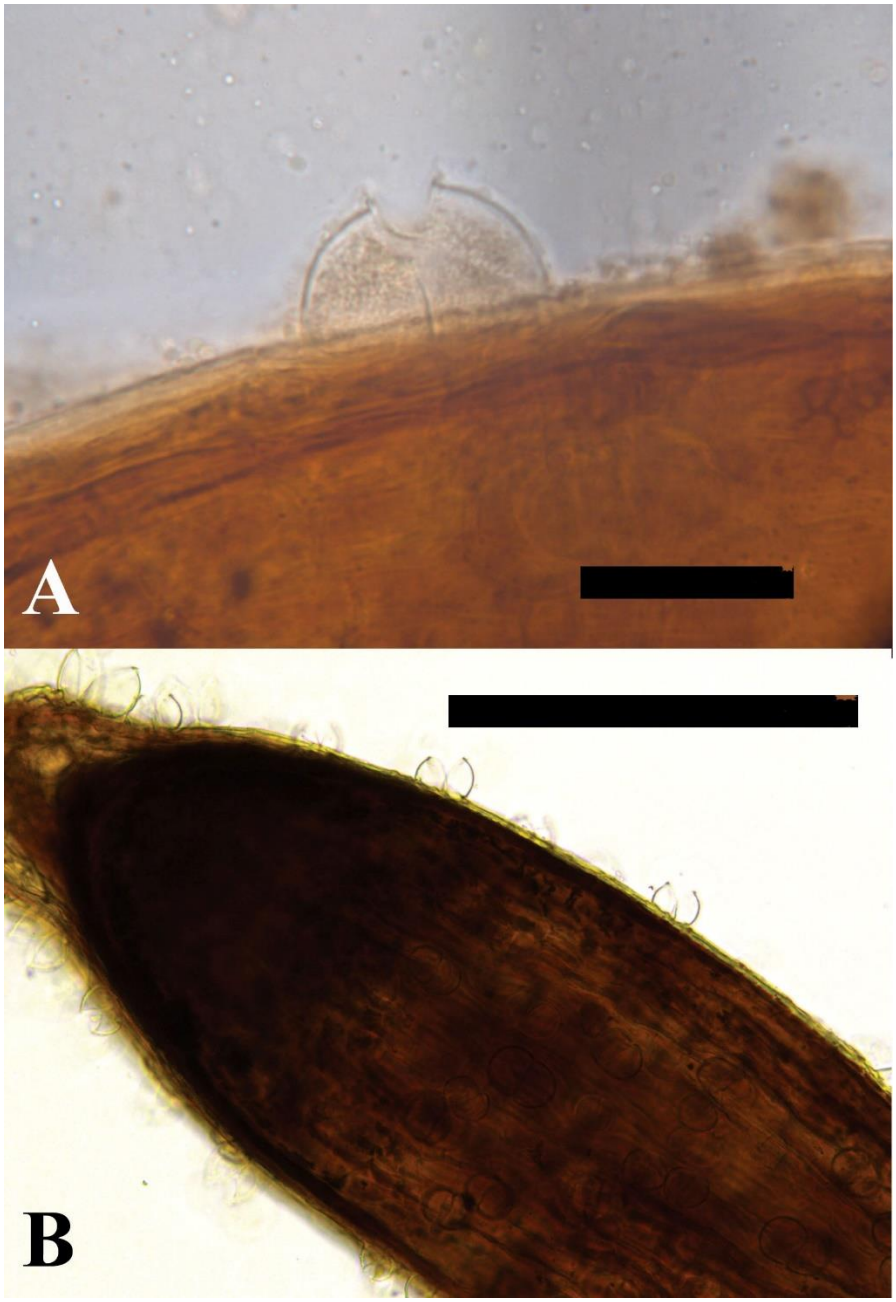
based upon characters of achenial trichomes. Small characters found in the surfaces of achenes (Dillon, 1988; Dillon and Sagástegui, 1991a) have beenutilized to circumscribe taxonomic groups in the Gnaphalieae as in other tribes (Ciccarelli et al., 2007; Hansen, 1990; Mukherjee and Nordenstam, 2012; Narayana, 1979; Pope, 1983). The presence and/or type of achenial trichomes have proven to have phylogenetic significance in the Gnaphaliinae (Abid and Qaiser, 2008; Luebert et al.,2017).

*Gamochaeta* is a genus of 50-60 species distributed primarily in the warmer regions of the New World, but with several species adventive in the Old World (Urtubey et al., 2016). The taxonomy of Andean *Gamochaeta* is extremely difficult because easily observable or quantifiable characters are lacking; they are typified as having obovate to spathulate leaf forms, usually spiciform capitulescence, involucre cylindrical to conical, number and ratioof masculine to feminine florets per capitulum, pappus bristles fused at the base, and achenial surface sculpturing and pubescence. Species exhibit considerable morphological plasticity, presumably in response to environmental and edaphic influences.

Although *Gamochaeta* was described by Weddell in the mid-1850s, it was not immediately accepted by systematic botanists. Drury (1970, 1971) looked at the genus in detail and did not recognize it as a distinct. A decadelater, Hilliard and Burtt (1981) examined the Gnaphaliinae and recognized non-traditional characters of considerablevalue. They listed as important in classification: the structure of the stereome of the phyllaries, type of trichomes on the achenes, and pappus characters. While they recognized the differences displayed in achenial trichomes, *Gamochaeta* was only accepted as a section of *Gnaphalium* (*Gnaphalium* sect. *Gamochaeta* (Wedd.) O. Hoffm.) (Hilliard and Burtt, 1981, p. 9). Early on, Cabrera (1961, 1978) accepted *Gamochaeta* as a distinct genus and transferred at least one *Mniodes* (= as *Merope*) into *Gamochaeta* (see below).

Achenial trichomes originate from a single protoderm initial within the epidermal tissue, regardless of the ultimate type formed; two primary modes of development of twin hairs or duplex trichomes (*Zwillingshaares*) are discussed by Hess (1938). In some genera, the achenial duplex trichomes are modified with the myxogenic basal cell(*Schwellpolster*); however, the apical cells are much reduced, for example, in *Chevreulia* Cass. (ca. 50 μm), *Jalcophila* M.O. Dillon & Sagást. (ca. 40 μm) and *Gnaphaliothamnus* Kirp. (70-140 μm) (Dillon & Luebert, 2015). The other ontogenetic plan presented by Hess (1938, p. 443) corresponds to the biseriate, capitate-glandular trichomes recorded in *Mniodes* (30--40 μm), *Loricaria* Wedd. (ca. 120 μm), and *Quasiantennaria* Bayer & M.O. Dillon (30–42 μm) (Bayer & Dillon, 2019). The basal cell has been reduced, and the apical cells are myxogenic, absorbing water, and often rupturing when exposed to water. Both *Gamochaeta* and *Stuckertiella* Beauverd possess achenes with the ultimate in trichome reduction where 2-celled myxogenic trichomes 10–15 μm above the surface ofthe achenes (Fig. 1, A-B); these can rupture when exposed to water (Fig. 1, A). *Stuckertiella* has been transferred to *Gamochaeta* (Urtubey et al., 2016).

**Fig. 1. Achenial trichomes elaborated in *Gamochaeta pickeringii*, A, Light microscope preparation from Capt. Wilkes Exped. s.n. (GH [HUH0009893]), scale bar = 0.15 mm. B, Light microscope preparation from Capt. Wilkes Exped s.n. (US-62685), scale bar = 0.4 mm.**



## MATERIALS AND METHODS

Herbarium material was investigated in person or via loans from the following herbaria: B, BM, COL, CONC, F, GH, HSP, HUT, K, LPB, M, MO, NY, QPLS, SGO and US. We thank the curators and collection mangers who facilitated recent visits to COL, LPB, and SGO. A loan of relevant type material from Paris (P) was requested; however, the loan was not fulfilled and only the photographs have been consulted to date. Dried herbarium material was used after rehydration for measurements and descriptions of achene surface structures. Herbarium acronyms follow Thiers (2023).

## NEW COMBINATIONS

***GAMOCHAETA PICKERINGII*** (A. GRAY) M.O. DILLON & QUIP., *COMB. NOV.*

Basionym: *Lucilia pickeringii* A. Gray, Proc. Amer. Acad. Arts 5: 138. 1862.TYPE: PERU. Junín, Baños Alpamarca, *Capt. Wilkes Exped. s.n. pro parte* (Lectotype designated by Freire, Darwiniana 27: 470. 1986: GH [GH0009893], Isolectotype: US-62684 [US00323664]. *Belloa pickeringii* (A. Gray) Sagást. & M.O. Dillon; *Luciliocline pickeringii* (A. Gray) M. O. Dillon & Sagást.; *Mniodes pickeringii* (A. Gray) S.E. Freire, Chemisquy, A. Anderb. & Urtubey (Fig. 2.)

Basionym: *Lucilia pickeringii* var.? *minor* A. Gray, Proc. Amer. Acad. Arts 5: 138. 1862. TYPE: PERU. Junín,Casa Cancha-Culnai, *Capt. Wilkes Exped. s.n*. (Holotype designated by K. Gandhi: GH [GH0009894],Isotype: US-62685 [US00323665].

Distribution: Bolivia and Peru.

*Gamochaeta pickeringii* was described from a locality in the Andean Cordillera above Lima, Peru. There have been reports of this species (as *Luciliocline pickeringii*) from as far south as Salta, Argentina and as far north asEstado Mérida, Venezuela (Freire, 1986). The records of collections reported for Argentina and Venezuela are highly dubious and must be checked for authenticity. The occurrence of this species in Bolivia is likely and must beconfirmed.

In 1838, six United States Navy vessels set sail for an around the world voyage of discovery. The expedition contained a group of "Scientifics" that included botanists, naturalists, artists, taxidermists, and other scientists to collect and catalog plant, animal, and cultural artifacts (Wilkes, 1849). In May 1839, the expedition arrived in Lima,Peru from Chile and between 21-24 May a group of scientists made a trip from Lima into the Andean Cordillera to make collections and observations. These scientists included Charles Pickering (naturalist), William Rich (botanist) and William D. Brackenridge (horticulturalist), the latter botanist replaced Asa Gray who was originally scheduled to go on the expedition but accepted a job at Harvard University instead. The group visited several localities primarily in Department Junín, including

Obrajillo, Culnai, Alpamarca, Baños, and Casa Cancha. Among the collections made were several small cushion plants occupying various habitats above 3500 m.a.s.l. No formal attribution as to collector is on the printed labels and the exact collector of specific phanerogams from the Expedition is unknown. Regrettably the collecting localities, now, are largely eliminated by human activity over thelast 150 years.

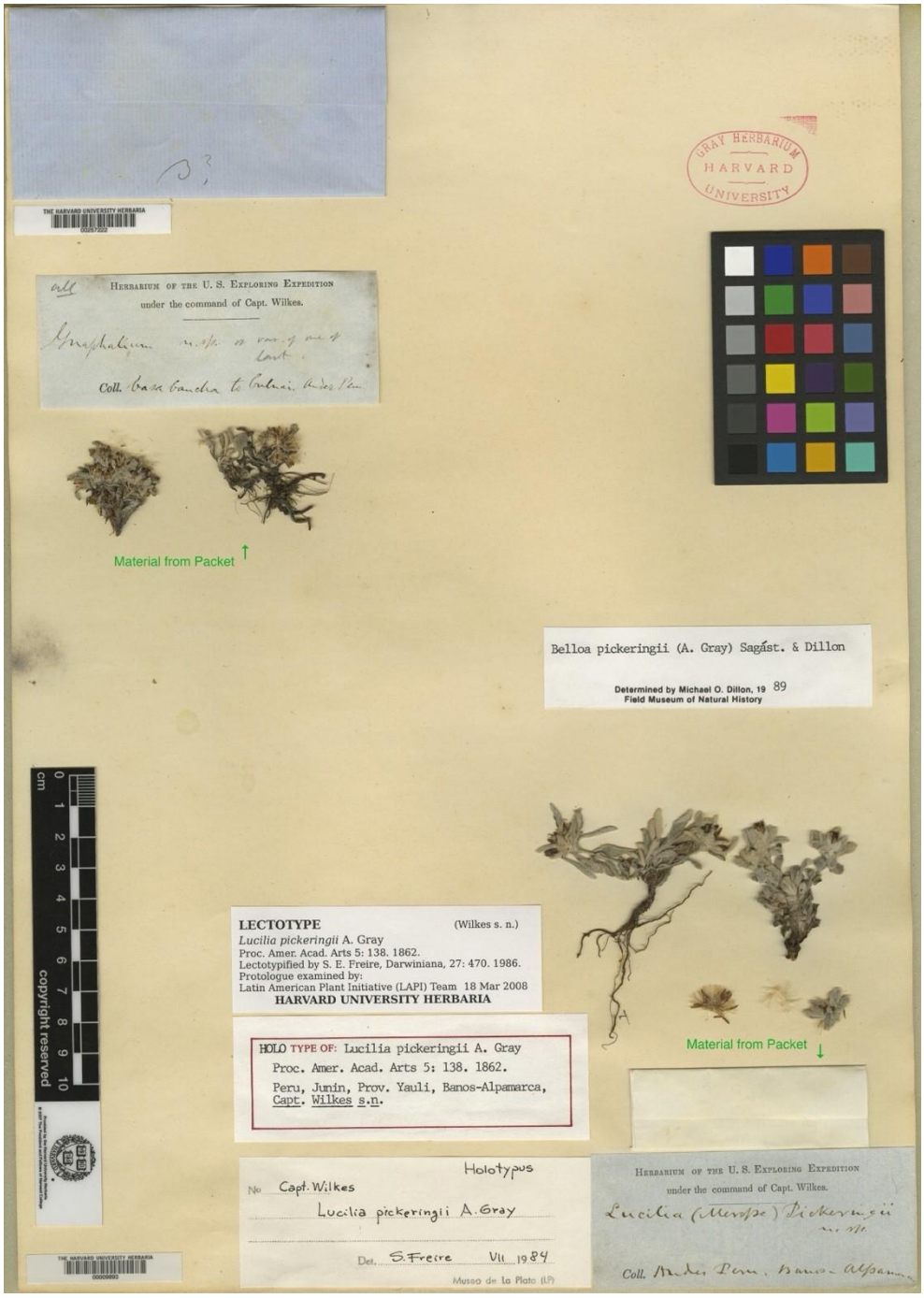
The species epithet commemorates Charles Pickering (b. 1805-d. 1878), one of the naturalists on the Capt. Wilkes Expedition (Wilkes, 1849). Asa Gray dedicated no fewer than 20 species for Pickering from a wide variety of genera and families with his epithet (Gray, 1845).

Gray (1862) described *Lucilia* (*Merope*) *pickeringii* as possessing "acheniis minutim papillosii" and at the same time moved several of Weddell's *Merope* to *Lucilia*. Gray dismissed the pubescence on the achenes as unimportant and allowed for both papillose and silky achenes in his concept of *Lucilia*. Gray further transferred *Merope piptolepis* Wedd. and *M. schultzii* Wedd. to *Lucilia*. Gray (1862) treated his new species under *Lucilia* and he argued that *Belloa* Rémy, as well as *Merope*, should be placed into the synonymy of the former genus. He commented that the only thing separating them was the type of achenial pubescence, i.e., papillose instead of silky achenes. It has been demonstrated that the achenial pubescence has a strong phylogenetic signal and achenial trichomes can circumscribe genera (Luebert et al., 2017).

Dillon and Sagástegui (1991b) listed collections from Department of Cusco, *Herrera 2397* (F-589478) and *Macbride & Featherstone705* (F-5172233, US-1186073) as *Belloa pickeringii*; however, a re-examination of these collections shows them to be *Mniodes piptolepis* (Wedd.) S.E. Freire, Chemisquy, Anderb. & Urtubey. Further, a collection from Department of Tacna by *E. Werdermann*(*#1148*) at Kew was annotated by Dillon (1998) as "*Belloa pickeringii* (A. Gray) Sagást. & Dillon, *vel aff*."; and Nicolas Hind (Kew) annotated the collection as "*Lucilia schultzii* (Wedd.) A. Gray". Additional examination of this and duplicate collections (CONC and MO), confirms that this collection is *Gamochaeta humilis* Wedd. (see below).

**Fig. 2. *Gamochaeta pickeringii*. Type herbarium sheet of *Lucilia pickeringii*. Perú. Junín, Yauli, Baños – Alpamarca, Capt. Wilkes Exped. s.n. (Lectotype: GH [HUH00009893]).**

**Upper left-hand corner fragment of holotype: *Lucilia pickeringii* var. *minor* A. Gray, Proc. Amer. Acad. Arts 5: 138. 1862. Perú. Lima, Casa Cancha, Capt. Wilkes Exped. s.n. (Lectotype: GH [HUH00257222]).**



***GAMOCHAETA VIRESCENS*** (WEDD.) M.O. DILLON & QUIP., *COMB. NOV.*

Basionym: *Merope virescens* Wedd., Chlor. Andina 1: 163. 1855 [1856]. TTPE: BOLIVIA. La Paz: *H. A. Weddell s.n.* (Holotype: P00704587, FM neg. 37612; Isotype: LP002199); *Belloa virescens* (Wedd.) Cabrera, Revista Invest. Agric 11: 404. 1957; *Gnaphalium viridescens* Cabrera, Notas. Mus. La Plata, secc. Bot.13(56): 15. 1948, *nomen novum*, replacement name for *Merope virescens*, non *Gnaphalium virescens* Kuntze (1898, p. 155). Fig. 3.

Distribution: Argentina and Bolivia.

In 1855-56, Hugo Weddell provided a treatment for his "Subtribe VIII Gnaphalieae" where he established a "Div. I Dialytrichieae" to contain *Gnaphalium* L. and *Achyrocline* (Less.) DC. His "Div. II. Gamotrichieae" was established to contain eight genera, including *Gamochaeta*, with four species and *Merope* with eight species. He had visited Bolivia and collected material of an array of new species. Cabrera (1978) accepted this species within *Belloa virescens*, along with *B. schultzii*, and cited collections from Bolivia and Argentina. Freire et al. (2016) placed it under the synonymy of *Mniodes schultzii*, a position we reject. Whether this is but a synonym of another species has yet to be determined.

**Fig. 3. *Gamochaeta virescens*. Holotype of *Merope virescens* Wedd., Bolivia, La Paz, H.A. Weddell s.n. (P00704587).**

**EXCLUDED NAME**

*Gamochaeta humilis* Wedd., Chlor. And. 1: 153. 1855 [1856]. TYPE: BOLIVIA. La Paz, Chuquiaguillo, La Lancha,4500 m.a.s.l., 1851, *H. A. Weddell s.n.* (Lectotype, designated Freire et al., 2016) P00704631; Isolectotype P 00704632).

Heterotypic synonym: *Lucilia subspicata* var. *microcephala* Hieron., Bot. Jahrb. Syst. 29: 29. 1900. TYPE: Ecuador. Chimborazo, volcán Chimborazo, 3600 m.a.s.l., September 1891, *L. Sodiro 21/1 bis* (Holotype: B, destroyed; Isotype: QPLS, barcode: QPLS211163). Fig. 4.

*Gamochaeta humilis* is recorded from Colombia, Ecuador, Peru, Bolivia, northern Chile and Argentina at higher elevations, 3400--4600 m.a.s.l. It is a species characterized by cespitose habit, usually less than 12 cm tall, mostly falcate leaves, and glomerulate capitulescences. In general habit, it approaches the form of various *Mniodes* species, but *G. humilis* may be distinguished by the truncate style branches of the hermaphroditic florets and sessile,2-celled achenial trichomes that diagnose the genus.
Kew Royal Botanic Gardens, Plants of the World Online list *Gnaphalium multicapitatum* Rusby (Descr. S. Amer. Pl.: 149. 1920) as a synonym of *Gamochaeta humilis*. Inspection of type material show this collection is not a synonym of *Gamochaeta humilis*, rather a synonym of *Stuckerteriella* now treated as *Gamochaeta* (Freire et al., 2016).

**Fig. 4. *Gamochaeta humilis*. Isotype of *Lucilia subspicata* var. *microcephala* Hieron., Ecuador, Sodiro 21/1 bis (QPLS).**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**REFERENCES**

ABID, R. & M. QAISER. 2008. Cypsela morphology of *Gnaphalium* L. and its allied genera (Gnaphalieae- Asteraceae) from Pakistan. Pak. J. Bot. 40: 25--31.

ANDERBERG, A. A. 1991. Taxonomy and phylogeny of the tribe Gnaphalieae (Asteraceae). Opera Bot. 104: 1– 195.

BAYER, R. J. & M. O. DILLON. 2019. *Quasiantennaria* (Asteraceae, Gnaphalieae), a new genus from the central Andes. / *Quasiantennaria* (Asteraceae, Gnaphalieae), un nuevo género de los Andes centrales. Arnaldoa 26: 9--26.

CABRERA, A. L. 1948. Compuestas nuevas del Noroeste de la Argentina. Notas Mus. La Plata, Bot. 13 (56): 15.

CABRERA, A. L. 1957. La vegetación de la Puna Argentina. Revista Invest. Agríc. 11(4): 317–412.

CABRERA, A. L. 1961. Observaciones sobre las Inuleae-Gnaphalineae (Compositae) de América del Sur. Bol. Soc. Argent. Bot. 9: 359–386.

CABRERA, A. L. 1978. Compositae. Flora de la provincia de Jujuy. Colecc. Ci. Inst. Nac. Tecnol. Agropecu. 13: 1–726.

CICCARELLI, D., F. GARBARI & A. M. PAGNI. 2007. Glandular hairs of the ovary: a helpful character for Asteroideae (Asteraceae) taxonomy? Ann. Bot. Fenn. 44: 1–7.

DILLON, M. O. 1988. Generic limits and microcharacters in the South American Gnaphaliinae (Asteraceae-- Inuleae). Am. J. Bot. Abst. 75: 456

DILLON, M. O. 2005. Familia Asteraceae. In: Flora genérica de los páramos: Guía ilustrada de las plantas vasculares. P. Sklenár, J. L. Luteyn, C. Ulloa-U, P. M. Jørgensen, and M. O. Dillon (Eds). Mem. N. Y. Bot. Gard. 92: 96– 180.

DILLON, M. O. & A. SAGÁSTEGUI. 1991a. Sinopsis de los géneros de Gnaphaliinae (Asteraceae–Inuleae) de Sudamérica. Arnaldoa 1: 5–91.

DILLON, M. O. & A. SAGÁSTEGUI. 1991b. Family Asteraceae: Part V. Tribe Inuleae. In: J. F. Macbride & Collaborators, Flora of Peru, Fieldiana: Botany, N.S. 26, 1--70. https://doi.org/10.5962/bhl.title.2549

DILLON, M. O. & F. LUEBERT. 2015. *Gnaphaliothamnus nesomii* (Asteraceae, Gnaphalieae), A New Species from Guatemala and Nomenclatorial Changes in the Gnaphaliinae. J. Bot. Res. Inst. Texas 9: 63--73.

DRURY, D. G. 1970. A fresh approach to the classification of the genus *Gnaphalium* with special reference to the species present in New Zealand (Inuleae-Compositae). N. Z. J. Bot. 8: 222--248.

DRURY, D. G. 1971. The American spicate cudweeds adventive to New Zealand (*Gnaphalium* section Gamochaeta - Compositae). N. Z. J. Bot. 9: 157--185.

FREIRE, S. E. 1986. Revisión del género *Lucilia* (Compositae, Inuleae). Darwiniana 27: 431–490.

FREIRE, S. E., L. SALOMÓN, N. D. BAYÓN, C. M. BAEZA, M. MUÑOZ-SCHICK & M.A. MIGOYA. 2016. Revision of the genus *Gamochaeta* (Asteraceae, Gnaphalieae) in Chile. Gayana Bot. 73: 252--305. https://doi.org/10.4067/s0717-66432016000200292.

GRAY, A. 1854. Vol XV. Botany Phanerogamia, part 1. U.S. Expl. Exped. 1--777.

GRAY, A. 1862. Characters of some Compositae in the collection of the United States South Pacific Exploring Expedition under Captain Wilkes, with observations, &c. Proc. Am. Acad. Arts Sci. 5: 114–146.

HANSEN, H. V. 1990. Phylogenetic studies in the Gerbera-complex (Compositae, tribe Mutisieae, subtribe Mutisiinae). Nord. J. Bot. 9: 469–485.

HESS, R. 1938. Vergleichend Untersuchungen über die Zwillingshaare der Compositen. Bot. Jahrb. Syst. 68: 435– 496.

HILLIARD, O. M. & D B. L. BURTT. 1981. Some generic concepts in Compositae Gnaphaliinae. J. Linn. Soc. Bot. 82: 181--232.

KUNTZE, O. 1898. Compositae. Revis. Gen. Pl. 3(1--3): 127--185.

LUEBERT, F., A. MOREIRA-M., K. WILKE, & M. O. DILLON. 2017. Phylogeny and evolution of achenial trichomes in the *Lucilia*-group (Asteraceae: Gnaphalieae) and their systematic significance. Taxon 66: 1184--1199.

MUKHERJEE, S. K., & B. NORDENSTAM. 2012. Diversity of trichomes from mature cypselar surface of some taxa from the basal tribes of Compositae. Compos. Newsl. 50: 78–125.

NARAYANA, B. M. 1979. Taxonomic value of trichomes in *Vernonia* Schreb. (Asteraceae). Proc. Indian Natl. Sci. 88B, part II (5): 347–357.

POPE, G. V. 1983. Cypselas and trichomes as a source of taxonomic characters in the Erlangeoid genera. Kirkia 12: 203–231.

THIERS, B. M. 2023. [continuously updated]. Index Herbariorum. A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. New York Botanical Garden, Bronx, New York, USA. Website http://sweetgum.nybg.org/science/ih (accessed November 11, 2024).

URTUBEY, E., A. LÓPEZ, M. A. CHEMISQUY, A. A. ANDERBERG, C. M. BAEZA, N. D. BAYÓN, L. P. DEBLE, A. MOREIRA-MUÑOZ, G. L. NESOM, M. H. ALFORD, L. SALOMÓN, & S. E. FREIRE. 2016. New Circumspection of the Genus *Gamochaeta* (Asteraceae, Gnaphalieae) Inferred From Nuclear and Plastid DNA Sequences. Pl. Syst. Evol. 302: 1047--1066.

WEDDELL, H. A. 1855 [1856]. Chloris Andina, vol 1. Chez P. Bertrand, Paris, 1–231. doi: 10.5962/bhl.title.217.

WILKES, C. 1849. Voyage Round the World: Embracing the Principal Events of The Narrative of The United States Exploring Expedition, Chapter IX, pps: 97-121.

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