

HICKENIA

Boletín del Darwinion

Instituto de Botánica Darwinion, Labardén 200, C.C. 22, (1642) San Isidro. Argentina.
TEL. (541) 743-4800. FAX (541) 747-4748, (541) 742-8534



ACADEMIA NACIONAL DE CIENCIAS
EXACTAS, FÍSICAS Y NATURALES

Y CONSEJO NACIONAL DE INVESTIGACIONES
CIENTÍFICAS Y TÉCNICAS

VOLUMEN II

SAN ISIDRO, 16 JUNIO DE 1997

Nº 45

TWO NEW SPECIES OF *UNCINIA* (CYPERACEAE) FROM AUSTRAL SOUTH AMERICA AND A FIRST REPORT OF *U. NEGERI* IN ARGENTINA

GERALD A. WHEELER

University of Minnesota Herbarium, Department of Plant Biology. St. Paul, Minnesota 55108-1095, U.S.A.

ABSTRACT: "Two new species of *Uncinia* (Cyperaceae) from austral South America and a first report of *U. negeri* in Argentina". *Hickenia* 2 (45): 215-222 1997.

Two new species of *Uncinia* (Cyperaceae) are described from southern South America. *Uncinia andina* G. A. Wheeler (sect. *Platyandrae*) and *U. scabriuscula* G. A. Wheeler (sect. *Uncinia*) are transandean species that occur in Argentina and Chile, where both have been collected in *Nothofagus* forest. Additionally, *U. negeri* Kük. (sect. *Uncinia*) is reported for the first time in Argentina.

INTRODUCTION

An estimated 60 to 70 species of *Uncinia* Pers. (Cyperaceae) occur worldwide, all of which grow south of the Tropic of Cancer (Wheeler and Goetghebeur 1995, in press). Of these, about 25 are known from the mountains and cooler regions of South America. In this paper, two new species of *Uncinia* are described from northern Patagonia, with both occurring in Argentina and Chile. In addition, *U. negeri* Kük. is here reported for the first time from Argentina.

DESCRIPTIONS AND COMMENTS

Uncinia scabriuscula G. A. Wheeler, sp. nov. Fig. 2

Herbae caespitosae; culmi 32-57 cm alti, marginibus scabrellis; vaginæ basales pallide brunneæ, glabrae. Folia 3-5, basilaria; laminae 5.5-30 cm longae, 3.5-7.5 mm latae; ligulae 3-9 mm longae. Spica solitaria, terminalis, androgyna, linearis.

cylindrica, 4.5-8.5 cm longa, 3-5 mm lata. Pars mascula 7-14 mm longa, ca. 9-17-flora. Pars feminea ca. 20-45-flora; squamae pistillatae persistentes, 4.5-7 mm longae, 1.5-2.3 mm latae, subcoriaceae. Perigynia 4.5-5.6 mm longa, 1.4-1.9 mm lata, superne parce hispidula. Achenium 2.9-3.3 mm longum, 1.4-1.7 mm latum; rachilla 7.1-8.4 mm longa, exserta pars 2.9-4.2 mm longa. Stigmata 3. Antherae 3, 1.2-1.5 mm longae, ca. 0.2 mm latae; filamenta linearia, ca. 0.1 mm lata.

TYPE: ARGENTINA. PROV. NEUQUÉN, Dpto. Huilches, Parque Nacional Lanín, Epubasquen, camino a los baños, 3-III-1968, Eskuche & Klein 1547-15 (Holotype: G; Isotype: ? CTES).

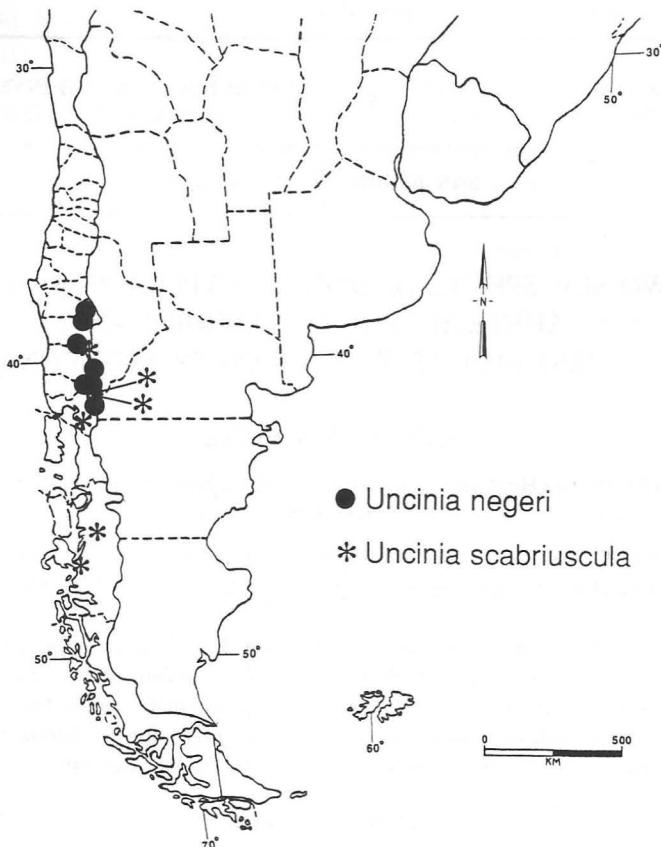


Fig. 1. Map of southern South America showing the distributions of *Uncinia negeri* and *U. scabriuscula*.

Plants cespitose with short rhizomes. Fertile culms 32-57 cm tall, 1-1.5 mm thick, erect or slightly curved, exceeding the leaves, more or less trigonous, scabrous distally (especially beneath the inflorescence) and smooth or, more often, scaberulent proximally, with glabrous, pale brown basal sheaths. Leaves 3-5, basal; blades 5.5-30 cm long, 3.5-7.5 mm wide, more or less ascending, flat or plicate, glabrous, the margins antrorsely scabrous (at least distally); inner band of leaf sheaths hyaline or pale brown, glabrous, the apex concave; ligules 3-9 mm long, subacute to acute. Inflorescence a solitary, androgynous spike, 4.5-8.5 cm long, 3-5 mm wide, linear-cylindric. Staminate part 7-14 mm long, ca. 9-17-flowered; scales 3-4.5 mm long, 1.2-2.2 mm wide, oblong to obovate, obtuse, glabrous, greenish brown center with broad, stramineous or pale brown margins and usually reddish brown near the apex, 3-5-veined, the tips with hyaline margins and ciliolate.

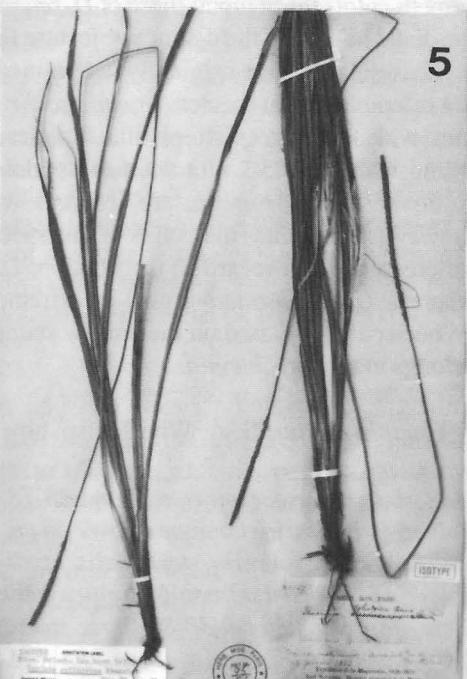
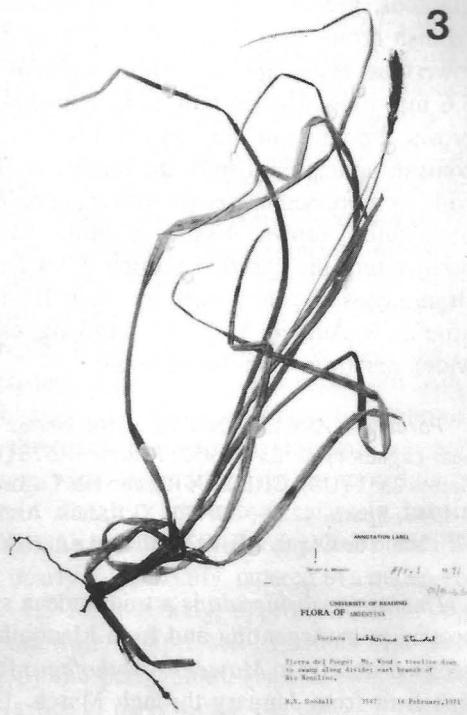
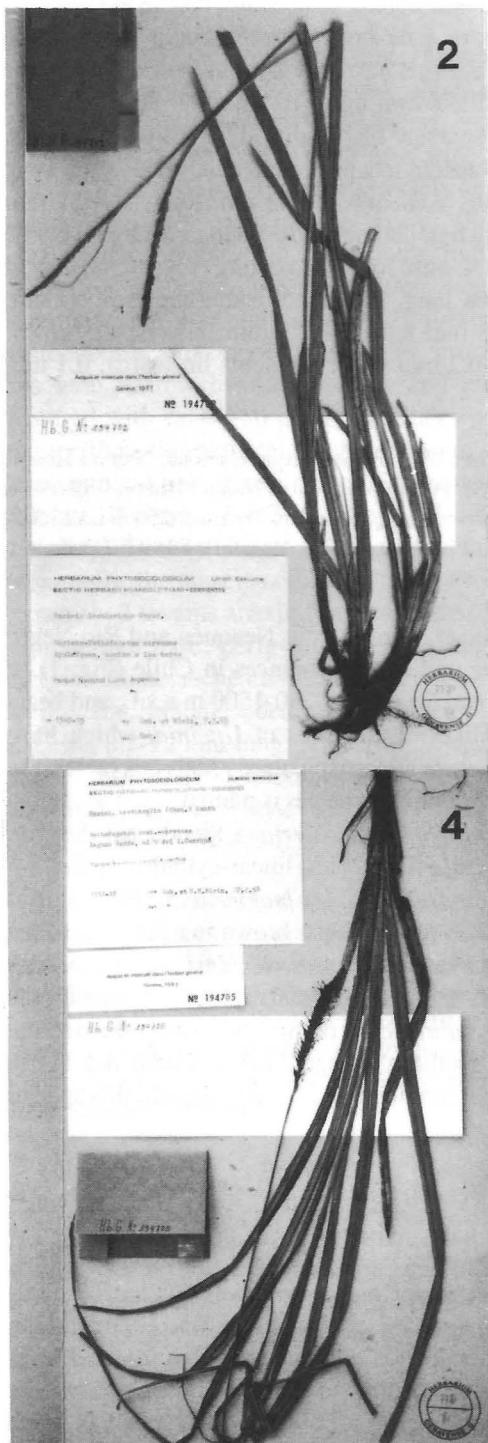


Fig. 2-5: 2. Habit of *Uncinia scabriuscula* (from de holotype, Eskuche & Klein 1547-15 [G]). 3. Habit of *Uncinia lechleriana* (Tierra del Fuego, Argentina, Goodall 3547 [RNG]). 4. Habit of *Uncinia andina* (from de holotype, Eskuche & Klein 1512-18 [G]). 5. Habit of *Uncinia cylindrica* (from de isotype, Savatier 167 [P]).

Pistillate part more or less tightly flowered with ca. 20-45 perigynia; scales persistent, 4.5-7 mm long, 1.5-2.3 mm wide, subcoriaceous, oblong to obovate, obtuse to subacute, glabrous, greenish center with stramineous or pale brown margins and usually pale reddish brown near the apex, 7-13-veined, the tips narrowly hyaline and ciliolate, the lowermost one sometimes with a scabrous-ciliate awn up to 10 cm long. Perigynia 4.5-5.6 mm long, 1.4-1.9 mm wide, elliptical, sparsely hispid distally, greenish brown to brown, 2 prominent veins and the rest faint, tapered to a puckered base; perigynium beak conical, appressed hispid, the margins ciliate. Achenes 2.9-3.3 mm long, 1.4-1.7 mm wide, compressed trigonous with more or less flat, oblong sides, tightly enveloped by the perigynium, brown, sessile. Rachilla 7.1-8.4 mm long, projecting beyond orifice of perigynium, the exserted portion 2.9-4.2 mm long, smooth or sometimes scaberulent, stramineous or pale brown, the hook 1.3-1.8 mm long and stramineous or pale brown. Stigmas 3. Anthers 3, 1.2-1.5 mm long, ca. 0.2 mm wide; filaments linear (ca. 0.1 mm wide), narrower than the anthers.

Paratypes: ARGENTINA. PROV. RÍO NEGRO: Dpto. Bariloche, Parque Nacional Nahuel Huapi, near Laguna Fria, 23-II-1952, Pedersen 1576 (US); Puerto Blest, Lago Nahuel Huapi, 9-III-1934, Barros 2351 (US). CHILE. X REGIÓN, Los Lagos, Prov. Llanquihue: Río Yucmao, 250 m a.s.l., 3-5-II-1948, Sparre 4239 (CONC). XI REGIÓN, Aisén, Prov. Aisén: Río Aisén, 19-I-1897, Dusén s.n. (G); Istmo de Ofqui, 1-II-1921, Hicken s.n. (NY).

Uncinia scabriuscula is a transandean species, known from Neuquén and Río Negro provinces in Argentina and from Llanquihue and Aisén provinces in Chile (Fig. 1). It grows primarily in *Maytenus-Nothofagus* forest, from about 250-1500 m a.s.l., and bears ripe fruit from January through March. Unlike most species of *Uncinia*, which have smooth culms throughout, those of *U. scabriuscula* are conspicuously scabrous (at least in the distal half), and the distinctive feature for which this species is named.

These plants were originally determined as *Uncinia lechleriana* Steud., but they are not referable to that species. *Uncinia scabriuscula* (Fig. 2) has linear-cylindric spikes 3-5 mm wide and greenish pistillate scales; in contrast, *U. lechleriana* (Fig. 3) has cylindrical spikes 5-9 mm wide and scales with dark reddish brown margins. Also, the culms of *U. scabriuscula* are scabrous, whereas those of *U. lechleriana* are smooth (however, sometimes the culms of this species are sparingly scaberulent just beneath the inflorescence). In regard to distribution, *U. scabriuscula* occurs in northern Patagonia, whereas *U. lechleriana* grows in extreme southern Patagonia and Tierra del Fuego (Wheeler 1994). Based on the narrow staminal filaments of *U. scabriuscula*, this species belongs in section *Uncinia*.

Uncinia andina G. A. Wheeler, sp. nov. Figs. 4, 6-7

Herbae laxae caespitosae; culmi 26-78 cm alti; vaginae basales brunneae, glabrae. Folia 5-9, basilaria; laminae (5.5-)9-56 cm longae, (3.5-)4-9 mm latae; ligulae 2-3.5 mm longae. Spica solitaria, terminalis, androgyna, 5-8 cm longa, 5-8.5(-10) mm lata, oblongo-cylindrica ad paulo elliptica densiflora. Pars mascula 9-18 mm longa, 15-35-flora. Pars feminea ca. 30-80-flora; squamae pistillatae persistentes, 3.8-6 mm longae, 1.6-2.4 mm latae, subcoriaceae, glabrae, apice albo ciliolatae. Perigynia 6-8.2 mm longa, 1.8-2.5 mm lata, superne scabrido-hispida, marginibus ciliata. Achenium 4-5 mm longum, 1.6-2 mm latum; rachilla 8.2-12 mm longa, exserta pars 2.8-5.2 mm longa. Stigmata 3. Antherae 3, 1.2-1.6 mm longae, ca. 0.2 mm latae; filamenta linearia dilatata, ca. 0.2-0.3 mm lata.

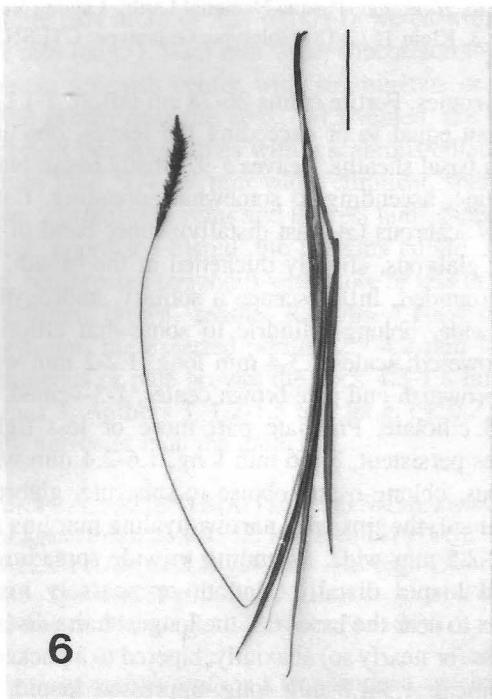
TYPE: ARGENTINA. PROV. NEUQUÉN: *Dpto. Huilches*, Parque Nacional Lanín, Laguna Verde, al W del Lago Currhué, 27-II-1968, Eskuche & Klein 1512-18 (Holotype: G; Isotype: CTESN).

Plants loosely cespitose with short rhizomes. Fertile culms 26-78 cm tall, (0.7-) 1-1.7 mm thick, erect or slightly curved, about equal to or exceeding the leaves, obscurely trigonous, smooth, with glabrous, brown basal sheaths. Leaves 5-9, mostly basal; blades (5.5-) 9-56 cm long, (3.5-) 4-9 mm wide, ascending to somewhat spreading, flat or plicate, glabrous, the margins antrorsely scabrous (at least distally); inner band of leaf sheaths hyaline or pale reddish brown, glabrous, slightly thickened at the mouth, the apex concave; ligules 2-3.5 mm long, rounded. Inflorescence a solitary, androgynous spike, 5-8 cm long, 5-8.5 (-10) mm wide, oblong-cylindric to somewhat elliptical. Staminate part 9-18 mm long, 15-35-flowered; scales 2.3-4 mm long, 1.2-2 mm wide, ovate, obtuse, subcoriaceous, glabrous, brownish and pale brown center, 1-3-veined, the tips with narrow hyaline margins and ciliolate. Pistillate part more or less tightly flowered with ca. 30-80 perigynia; scales persistent, 3.8-6 mm long, 1.6-2.4 mm wide, shorter than the perigynia, subcoriaceous, oblong-ovate, obtuse to subacute, glabrous, brownish and pale brown center, 3-5-veined, the tips with narrow hyaline margins and ciliolate. Perigynia 6-8.2 mm long, 1.8-2.5 mm wide, ascending to wide spreading at maturity, broadly elliptical, appressed hispid distally, smooth or sparsely hispid proximally, the margins ciliate from apex to near the base with the longest hairs distally, brownish, 2-9 veins abaxially and veinless (or nearly so) adaxially, tapered to a puckered, stipitate-like base; perigynium beak conical, 1.3-1.8 mm long, appressed hispid, the margins ciliate. Achenes 4-5 mm long, 1.6-2 mm wide, compressed-trigonous with more or less flat, oblong sides, tightly enveloped by the perigynium, dark brown, sessile. Rachilla 8.2-12 mm long, projecting beyond orifice of perigynium, the exserted portion 2.8-5.2 mm long, smooth, stramineous to brown, the hook 1.3-1.8 mm long and brownish. Stigmas 3; style base enlarged. Anthers 3, 1.2-1.6 mm long, ca. 0.2 mm wide; filaments linear, dilated (ca. 0.2-0.3 mm wide), as wide as or wider than the anthers.

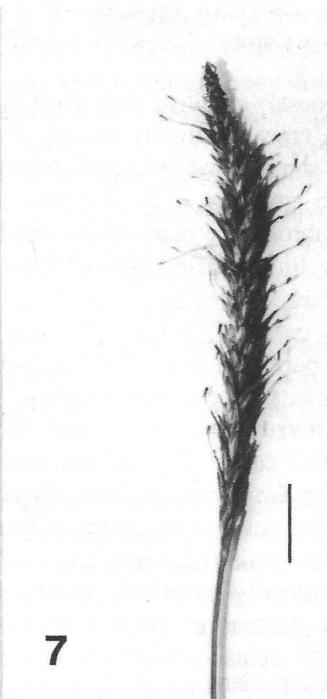
Paratypes: ARGENTINA. PROV. NEUQUÉN: *Dpto. Huilches*, Parque Nacional Lanin, Arroyo de Los Pinos, a 1 km desembocadura Lago Currhué, 18-II-1983, Cusato 2889 (BAA); Lago Epulafquen, extremo W camino a los baños de Epulafquen, 5-II-1963, Valla et al. s.n. (BAA-3253). PROV. RÍO NEGRO: *Dpto. Bariloche*, Parque Nacional Nahuel Huapi, Tronador-Picada a Laguna Los Cesares, 26-I-1983, Cusato 2454 (BAA, MIN). CHILE. VIII REGIÓN, DEL BÍO-BÍO: *Prov. Bío-Bío*: Volcán Antuco, 700 m, 19-II-1989, Zöllner 15316 (MIN). IX REGIÓN, DE LA ARAUCANÍA, *Prov. Cautín*: Volcán Villarrica, 1897, Neger s.n. (M); *Prov. Malleco*: Termas de Tolhuaca, 900 m, 22-I-1989, Zöllner 15364 (MIN).

Uncinia andina is known from Neuquén and Río Negro provinces in Argentine Patagonia and from Bío-Bío, Cautín, and Malleco provinces in Chile (Fig. 10). It grows in *Nothofagus* forest, at elevations from about 700 to 1500 m a.s.l., and specimens with ripe fruit have been collected in January and February. The epithet refers to the occurrence of this species in the Andes of southern South America.

These plants were originally determined as *Uncinia brevicaulis* (Thouars) Kunth, but they are not referable to that species. *Uncinia andina* (Figs. 4, 6-7) is characterized by having wide spreading, or divaricate, rachillae (Fig. 7) and perigynia that mostly exceed 6 mm long. In contrast, *U. brevicaulis*, whose type collection comes from the mid-Atlantic island of Tristan da Cunha, has smaller perigynia and achenes and rachillae that are little, if at all, divaricate. Also, *U. andina* has brown, subcoriaceous perigynia with subtending scales that are shorter than the perigynia, whereas *U. brevicaulis* has stramineous or pale brown, membranous perigynia and scales that are as long as or longer than the perigynia.



6



7



8



9

Figs. 6-9: 6-7. *Uncinia andina* (Prov. Malleco, Chile, from Zöllner 15364 [MIN]). 6. Habit. 7. Inflorescence (as shown in Fig. 6, but spike enlarged). 8-9. *Uncinia negeri* (Prov. Osorno, Chile, from Zöllner 20461 [MIN]). 8. Habit. 9. Inflorescence (as shown in Fig. 8, but spike enlarged). (Figs. 6 and 8, bar = 5 cm; Figs. 7 and 9, bar = 1 cm).

It is also worthy of note that *Uncinia andina* differs considerably from the type of *U. cylindrica* Franchet [(XII Región Magallanes y Antártica Chilena, Prov. Última Esperanza), Madre de Dios Archipelago, 1876-1879, Savatier 167 (P: Isotype; cf. Fig. 5 with Figs. 4, 6, and 7)], which Kükenthal (1909) and Barros (1947, 1969) considered to be identical with plants of *U. brevicaulis* from Tristan da Cunha. While it remains to be verified whether or not *U. brevicaulis* and *U. cylindrica* are conspecific, it is abundantly clear, in either case, that *U. andina* is a taxonomically distinct species. Based on characteristics of the stamens and perigynia, *U. andina* belongs in section *Platyandrae* C. B. Clarke (Clarke 1883 and Kükenthal 1909), i.e., the staminal filaments are as wide as or wider than the anthers and the margins of the appressed-hispid perigynia are ciliate from the apex to near the base.

A FIRST REPORT OF *UNCINIA NEGERI* IN ARGENTINA

While *Uncinia negeri* has previously been reported from Chile (Kükenthal 1898, 1909; Marticorena and Quezada 1985), this note represents the first report of it from Argentina. Citations for specimens of *U. negeri* mapped in Fig. 1 are given at the end of this report.

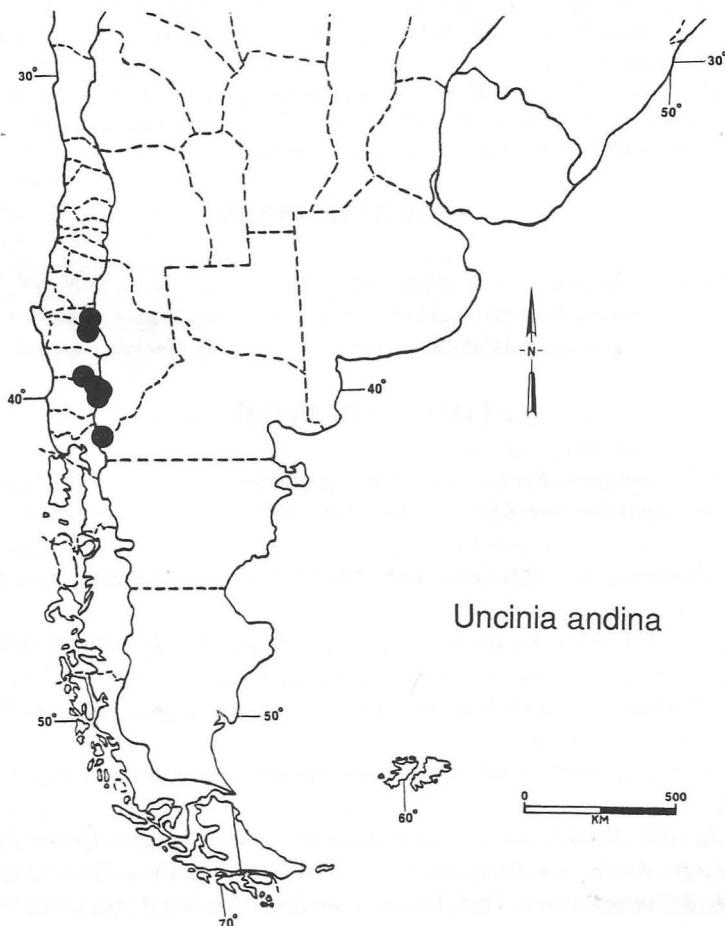


Fig. 10. Map of southern South America showing the distribution of *Uncinia andina*.

This transandean species is known from Neuquén and Río Negro provinces in Argentina and from Cautín, Malleco, Osorno, and Valdivia provinces in Chile. It is best known from wooded slopes of volcanic cones, where it grows primarily in "lenga" [*Nothofagus pumilio* (Poeppig & Endl.) Krasser] forest, at elevations from about 900 to 1700 m a.s.l. Plants with mature fruit have been collected from January through March. The species is named in honor of F. W. Neger, who made the type collection in central Chile in 1897.

Uncinia negeri (Figs. 8-9) is similar to *U. lecheriana* (Fig. 3) but differs by having glabrous perigynia and greenish spikes. Also, the former species has greenish scales, whereas those of the latter have dark reddish brown margins. *Uncinia negeri* differs from *U. scabriuscula* by having smooth culms and fewer perigynia per spike as well as larger perigynia, achenes, and scales. Like *U. lechleriana* and *U. scabriuscula*, this species belongs in section *Uncinia*.

Representative specimens. ARGENTINA. PROV. NEUQUÉN: Dpto. *Lacar*, Parque Nacional Lanín, San Martín de los Andes, Cerro Chapelco, 1700 m, 14-II-1961, León & Calderón s.n. (BAA-1032); Cerro Chapelco, 29-I-1966, Eskuche 622-12 (G); Dpto. *Los Lagos*, Parque Nacional Nahuel Huapi, Correntoso, Cerro Belvedere, 1300 m, 6-II-1934, Parodi 11707 (BAA); Parque Nacional Nahuel Huapi, Laguna Los Clavos, Pedersen 273 (US); Lago Correntoso, Arroyo Las Frutillas, 26-II-1966, Eskuche 771-17 (G). PROV. RÍO NEGRO: Dpto. *Bariloche*, Valle del Challhuauco, Refugio de Newmeyer, 4-I-1973, Agrasar et al. s.n. (BAA-12377). CHILE. IX REGIÓN, DE LA ARAUCANÍA, PROV. CAUTÍN: Volcán Llaima, 1000 m, 13-III-1948, Cañulaf s.n. (CONC-109695); Volcán Llaima, 1000 m, 28-30-I-1942, Gunckel 12433 (CONC-2 sheets); Volcán Llaima, 1500-1700 m, 4-7-I-1943, Gunckel 13917 (CONC), 13971 (CONC), 13978 (CONC), 14004 (CONC); Volcán Villarrica, s.d., Neger s.n. (M); Volcán Llaima, 1580 m, 24-25-III-1948, Sparre 4799 (CONC). PROV. MALLECO: Cordillera de Las Raices, 1100 m, 14-II-1982, Zöllner 19270 (MIN). X REGIÓN, DE LOS LAGOS, PROV. OSORNO: Antillanca, 900 m, 3-II-1988, Zöllner 20461 (MIN).

ACKNOWLEDGMENTS

This study is based on specimens from BAA, BM, CONC, G, GB, K, M, MIN, NY, P, and US; to the directors and curators of those herbaria I am very grateful for the loan of specimens. Also, I want to thank Otto Zöllner (Universidad Católica, Valparaíso, Chile) for *Uncinia* material from Chile.

LITERATURE CITED

- Barros, M. 1947. Cyperaceae: Scirpoideae, Rhynchosporideae, Caricoideae. In H. R. Descole (Ed.) *Genera et species plantarum Argentinarum*, 4(2): 259-539. Fundación e Instituto Miguel Lillo. Tucumán.
- _____. 1969. Cyperaceae. In N. M. Correa (Ed.) *Flora Patagónica*. Colecc. Ci. Inst. Nac. Tecnol. Agropecu. 8(2): 38-92.
- Clarke, C. B. 1883. On *Hemicarex* Benth., and its allies. *J. Linn. Soc. Bot.* 20: 374-403.
- Kükenthal, G. 1898. Ueber einige neue oder kritische Uncinien. *Bot. Centralbl.* 76:209-212.
- _____. 1909. Cyperaceae: Caricoideae. *Das Pflanzenreich*, 4.20(38): 1-824. A. Engler (Ed.) Leipzig. Wilhelm Engelmann.
- Marticorena, C. & Quezada, M. 1985. *Catálogo de la flora vascular de Chile*. *Gayana Bot.* 42 (1-2): 1-157.
- Wheeler, G. A. 1994. The *Uncinia* (Cyperaceae) of Tierra del Fuego, the Falkland Islands, and South Georgia. *Anales Inst. Patagonia Ci. Nat.*, Punta Arenas, Chile 22 (1993-94): 21-31.
- Wheeler, G. A. & Goetghebeur, P. 1995. Four new species of *Uncinia* (Cyperaceae) from northern South America. *Aliso* 14: 141-146.
- _____. & _____. In press. *Uncinia* (Cyperaceae) of Ecuador. *Aliso*.