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***Wolffiella caudata*, a new *Lemnaceae* species from the Bolivian Amazon region**

Elias LANDOLT

From a collection of *Lemnaceae* kindly sent by Dr. Stephan S. Beck, Herbario Nacional de Bolivia (LPB), La Paz, Bolivia, I detected a *Wolffiella* which had never been described before. Since the fronds of this species are contracted in a narrow tail-like distal part, the species is called "*caudata*" (Fig. 1).

***Wolffiella caudata* sp. nov.**

Frons parte proxima summa aqua natans, parte distante inundata, ovalis vel linguaeformis, prolongata in partem angustiore, 2-8 mm longa, 2-5 mm lata (pars angustior 1-4 mm longa, 0.4-0.8 mm lata, subacuta), cum cellulis pigmentiferis, cum lacunis aerenchymaticis in toto parte proxima. Stomata 0-4. Angulus sacculi gemmiferi 120°-150°; paries inferior sacculi non elonga-



Fig. 1. *Wolffiella caudata* from the type collection. Transparent sight (x 30)

tus, cum fasciculo cellularum elongatarum in submedio posito. Flores incognitae, fructi incogniti. Habitat in regione Amazonas Boliviae.

Holotypus: Beck No. 16922: LPB. Isotypus: ZT.

The fronds float with the basal part on the surface of the water and the distal parts submerged. Most often two cohere together, ovate or wide tongue-shaped, contracting asymmetrically into a tail-like appendix, rounded at apex, 2-8 mm long and 2-5 mm wide (appendix 1-4 mm long and 0.4-0.8 mm wide), with denticulate margin, and brown pigment cells (visible only on dead fronds); stomata 0-4; air spaces distinct, spread throughout the whole proximal wide part of the frond; angle of the pouch 120° to 150° ; track of longer cells situated near the middle of the lower wall; lower wall not prolonged downwards. Flowers and fruits unknown.

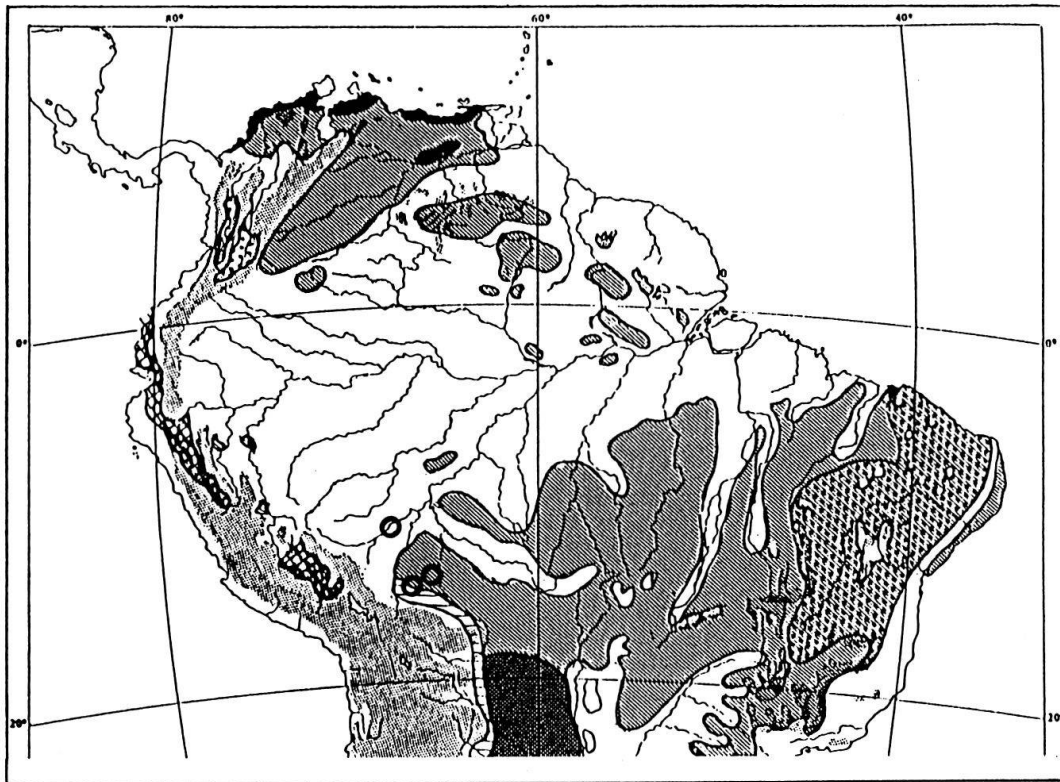
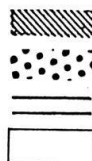


Fig. 2. Known localities of *Wolffiella caudata*. ○



tropical dry savannahs



tropical humid savannahs

tropical rain forest

The species belongs to the section, *Wolffiella*, and seems to be most closely related to *W. lingulata* from which it is easily distinguishable by the narrow appendix. It grows in the southwestern part of the Amazon Basin within the inundation area of some tributary rivers (e.g. Yacuma, Tahuamanú). The vegetation zone is the humid savannah. Region and climate are described in BECK (1983).

Known localities (Fig. 2):

1. Bolivia, Depto. Beni, Prov. Gral. Ballivián, Espiritu, en la zona de influencia del rio Yacuma, saban húmeda. 200 m. Bosque siempreverde de galería del rio Yacuma levemente inundado. Flotante en un meandro antiguo del rio Yacuma.
Leg. St. G. Beck No. 15322. 23.3.1990. Together with *Wolffiella lingulata*, *Lemna aequinoctialis*, *Lemna valdiviana*.
2. Bolivia, Depto. Beni, Prov. Yacuma, unos 60 km al este de San Borja. Estación Biológica Beni. 230 m. En el arroyo de la pascana con agua estancada y una capa flotante de plantas. Flotante, malezas.
Leg. St. G. Beck No. 16922. 21.7.1989. Together with *Wolffiella lingulata*, *Lemna valdiviana*, *Spirodela intermedia*. Typus collection!
3. Bolivia. Depto. Pando, Prov. Nicolas Suárez, Establecimiento Bella Flor sobre el rio Tahuamanú. 260 m. Bajando el rio Tahuamanú una hora y entrado en und bosque de bajura que se inunda por unos dos meses. Flotante sobre agua de un pozo estancado dentor del monte.
Leg. St. G. Beck, J. Inca, P. Pinto, I. Vargas No. 19238. 8.10.1989. Together with *Lemna aequinoctialis* and *Lemna valdiviana*.

SUMMARY

A new species of *Lemnaceae*, *Wolffiella caudata*, from the humid Savannah of the Bolivian Amazon region is described. It belongs to the *Wolffiella* section.

REFERENCE

BECK S., 1983: Vegetationsökologische Grundlagen der Viehwirtschaft in den Überschwemmungssavannen des Rio Yacuma (Depto Beni, Bolivien). Diss.Bot. 80, 186 p.

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