

Nowellia wrightii (Gott. ex Spruce) Steph.

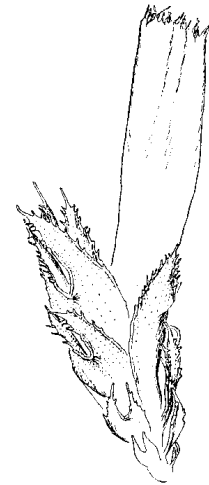
Status: **Vulnerable (VU)** B1,2c

Class: Jungermanniopsida

Order: Jungermanniales

Family: Cephaloziaceae

Description and biology: Members of the genus *Nowellia* are easily recognisable by its swollen watersack formed by the leaf bases, which character is unique within *Cephaloziaceae* family (see Fig. 1). The bilobed leaves are transversely inserted, densely arranged, overlapping each other, forming threadlike, julaceous, on the ground creeping shoots. This species is unique and distinctive by its serrate leaf margin, the teeth are formed by 1-3 elongated cells. (Among the other 8 *Nowellia* species on the World only *N. langii* in the eastern Malesia – New Caledonia has a bit similar, but much longer marginal ciliae, formed by 5-6 cells.) The morphology and taxonomy of *Nowellia* is described in very details by GROLLE (1968) in his monography on the genus. The plant, similarly to the other *Nowellia* species (like *N. curvifolia*, common in the boreal temperate needle leaved forests), occurs primarily on decaying wood, on the ground lying, rotting logs, sometimes also on bark, in more or less shady forests, at high atmospheric humidity.



Nowellia wrightii. i (Gott. ex Spruce) Steph. With permission from Dr. Riclef Grolle and The Journal of Hattori Botanical Laboratory.

Distribution and habitat: The plant lives exclusively in the montane rain forests of eastern Cuba, in the former Oriente Province within the range of 400-1400 m altitude, with higher than 2000 mm rainfall per annum. Normally it occurs above 1000 m, only in serpentine areas or in deep gorges descends below this level. Only in primeval forests, where the fallen trunks can accumulate and decay for time long enough, can develop the typical lignicolous community, where the plant finds suitable microhabitat. The known localities are: Sierra Maestra Mountains, top of Loma del Gato, 1300 m alt. (type locality, Santiago de Cuba Province), Monte Verde and Campamento Gupeyal (Gantánamo Province), Sierra de Nipe (Holguín Province).

The Author observed in the 30th of November 1978 the species in relative large quantity in the Sierra Maestra Mountains, Granma Province, on the NW side ridge of Pico Bayamesa called Subida Albear, at 1300-1400 m altitude, on a north facing slope. The habitat is a *Cyrilla racemiflora* (Cyrillaceae, Ericales) dominated montane cloud forest (*Cyrillo – Myrsinion* BORHIDI et al. 1979, BORHIDI 1991), with many tree ferns. The atmospheric humidity in this type of forest is quite high, although, due to the ericoid leaves of *Cyrilla*, the habitat is only half shady. There were, on the rocky ground, abundant decomposing logs (including decaying tree fern stems), with a rich lignicolous community, dominated by *Nowellia wrightii* (PÓCS 1982). The accompanying species were *Aneura* sp., *Cephalozia* sp., *Odontoschisma denudatum*, *Lophocolea coadunata*, *L. martiana*, *Plagiochila* sp. (hepaticae); *Lepidopilum robustum*, *Cyclodictyon lindigianum*, *Hookeriopsis guadeloupensis*, *Leucoloma cruegerianum*, *L. serrulatum* and *Mittenothamnium diminutivum* (mosses).

History and outlook: The type of this species was collected by CHARLES WRIGHT, in 1856 or 1857, when he visited the area surrounding El Cobre (where Loma del Gato is located, as it turns out from Underwood's account on the correspondence of WRIGHT with ASA GRAY. He then visited Monte Verde near Guantánamo in 1859 and 1860, where his second collection was made. On this base communicated GOTTSCHKE the plant, under the name of *Cephalozia wrightii*, in an exsiccata. SPRUCE validated his name in 1895. MITTEN (1870) established the genus *Nowellia* for the *Cephalozia* species with a watersack. Then STEPHANI (1908) established the new combination of *Nowellia wrightii*.

During last century, between 1915 and 1929, EKMAN collected the plant again between 1915 and 1929, in the Sierra de Nipe, The plants published by FULFORD (1968) under this name from Dominica and Guadeloupe belong to *N. dominicensis* Steph., according to GROLLE (1968). 50 years passed, when the species was collected again, in other localities, by SCHUBERT (1978) and by the Author. Most probably the old localities are already extinct, as both places visited by Wright are quite degraded nowadays. There is a hope that it still exists in Sierra de Nipe, although the Author visited the EKMAN locality together with DEYISI REYES MONTOYA and could not find it. From the more recently found localities the above described Subida Albear seems to be more safe, as falls within the area of the Grand National Park Sierra Maestra, although its habitat is already surrounded by deforested, degraded land. The Author was told by Cuban experts, that the surrounding area will be reforested by the native *Cyrilla racemiflora*. As already more 20 years elapsed again, it would be necessary to reinvestigate this habitat, which is rich also in other rare bryophytes, to see the present conservational state of this endangered species.

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Illustration: in Grolle, R. (1968)

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