

## On the status of *Pinnatella limbata* Dixon (Neckeraceae) as threatened species

Uwe Schwarz

Prestige Grand Oak 202, 7<sup>th</sup> Main, 1<sup>st</sup> Cross, HAL II<sup>nd</sup> Stage, Indira Nagar, Bangalore 560038, India, (schwarzu@lumot.de).

**Abstract:** An overview about new and previously known records of *Pinnatella limbata* is given, and a description and drawings of plants collected 2012 in Kodagu (Coorg) District, State of Karnataka, India are provided. Due to the new information of its distribution range it is recommended to remove *P. limbata* from the IUCN World Red List of Bryophytes.

**Keywords:** IUCN, bryophytes, endangered species, *Pinnatella limbata*, India.

### Introduction

Dixon (1921) described *P. limbata* (Neckeraceae) as a new species from Sampkhand, Kanara District based on a 1919 collection of L.J. Sedgwick. He found the plants as rheophytes attached to rocks in a fast flowing stream. Enroth (1994) considered the type location as the only locality for this species. As the species was only known from a single locality and due to the rapid destruction of the environment in India, *P. limbata* was assessed as a critically endangered species in the IUCN World Red List of Bryophytes (Bryophyte Specialist Group 2000).

However, the species was collected a second time by Raghavan in 1960 at Agumbe and published in Raghavan and Wadhwa (1968). They mention *Pinnatella limbata* as “fairly common, on moist rocks in association with *Papillaria fuscescens* (Hook.) Jaeg.”.

The bryophyte and lichen collections made by J.-P. Frahm, U. Schwarz and F. Schumm in the Kodagu (Coorg) District of the state of Karnataka, India, in November 2012 included *P. limbata* as well. It was found on moist rocks and roots between 1000 and 1250 m. A further sample from a closely located place within that area was collected by U. Schwarz and B. Ram in March 2013.

### Material and Methods

**Collection Localities.** All localities are situated in the state of Karnataka in the central part of the Western

Ghats with the type collection close to the border of Goa and the most southern collection near the border to the state of Kerala (Fig. 1).

#### *List of known collections.*

- India, State of Karnataka, Uttara Kannada District, Sampkhand, 14°32'38"N, 74°43'06"E, leg. L.J. Sedgwick, 1919, No. 6437, unknown altitude, Holotype BM, Isotypes FH, G, H-BR
- India, State of Karnataka, Shimoga District, Agumbe, 600 m, 13°29'42"N, 75°05'25"E, leg. Raghavan, May 15<sup>th</sup>, 1960, No. 62530A, herb. Botanical Survey of India, Pune
- India, State of Karnataka, Kodagu (Coorg) District, Kabbinakad, area around Kabbe Holiday Homestay, 1000-1280 m, 12°11'59"N, 75°39'54"E, leg. Frahm, Schwarz and Schumm, November 2 and 3, 2012, herb. U. Schwarz No. 10698, 10702, 10703, 10704, 10718
- India, State of Karnataka, Kodagu (Coorg) District, Kabbinakad, area around Honey Valley Homestay, 1170 m, 12°13'14"N, 75°39'19"E, leg. Schwarz and Ram, March 31, 2013, herb. U. Schwarz No. 10870

The elevation of the type location is not indicated but the geomorphology of the area suggests an altitude of approximately 600 m which suggests an elevational range of 600 – 1280 m for *P. limbata*. It was so far not detected at higher altitudes even though intensive collections were done along the track to the summit of Mt. Tadiandamol (1750 m).

The distance between the most northern and most southern localities is approximately 300 km.