

Short Communication

A NEW RECORD FOR BANGLADESH: *NITELLA POLYCARPA* Pal

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msiC: esj v† †ki iscj †Rjv n†Z c†B Nitella [Agardh] polycarpa Pal b†gK GKUJ U†v b GL††b eY††v Kiv n†j v| ††ki Rb† GKUJ bZb ††KW†

Key words: *Nitella polycarpa*, Characeae, new record, Bangladesh

Important works on Charophyta in Bangladesh have been done by Kundu (1929, 1934, 1935, 1938 and 1959), Agharkar and Kundu (1937), Islam and Sarma (1968, 1976), Zaman and Alam (1977), Aziz and Islam (1986), Zaman (2001), Aziz and Tanbir (2003) and Islam and Irfanullah (2005). Here we report a taxon of Charophyta that belongs to the family Characeae. It is a new record for the country.

The present plant specimen was collected from lowland (rice field) of Rangpur District situated at 25° 45' N to 89° 15' E. Immediately after collection, the specimen was washed in water 2-3 times and preserved in Transeau's solution. Herbarium specimen of the plant has been preserved in the Department of Botany, University of Rajshahi, Bangladesh. Camera Lucida drawings were made at 30, 60, 100 and 150× magnifications under a Reichert microscope (Nr.309209). Photomicrographs were taken by a SONY DSC W-55 camera. All measurements were recorded in µm. Identification of the specimen was done by following relevant literature.

Material studied and locality: Collection number N 1; Dated December 12, 2008; Location: Balabari, Ekarchali, Taragonj, Rangpur.

Habitat: Low land (rice field)

General: Readily distinguished from the nearly allied *Nitella microcarpa* and *N. furcata* by the occasional presence of a three-celled dactyl, and by the whorls being sterile (Zaneveld, 1940).

Reference to Bangladesh: Existing literature reveal that this species was not reported earlier from this country. Thus, *Nitella polycarpa* Pal is a new record for Bangladesh.

Distribution in Asia: 18° N; India, Burma: Tungoo (Zaneveld, 1940; Pal *et al.*, 1962, Wood and Imahori, 1965).

Description: The plant is monoecious, up to 8.2 cm high, stem moderately stout, 350.35-457.6 µm in diameter; internodes two times as long as branchlets,

264.55 µm in diameter, to 1.9 cm long, 5-6 in a whorl, spreading, 3-5 times furcate, primaries $\frac{2}{5}$ - $\frac{1}{2}$ the entire length of the branchlet, secondaries 2-4 of which one is central, tertiaries 2-3, quaternaries 2-3, sometimes unequal, occasionally few are again 3 times furcate into quinary; dactyls often unequal, 1-3 in number, 2-3 celled, elongated to abbreviated, occasionally mucronate, penultimate cell tapering to base of cell; end cell short or long conical; gametangia conjoined to solitary at all nodes; oogonia aggregated at the base of whorls and at first, second or third nodes, usually 2-5 antheridium present on ultimate nodes, second and third nodes; oogonium 328.9-414.7 µm long, 250.25-293.15 µm wide, convolutions 6-8, broadly ellipsoid, rarely stalked, stalk 143 µm long and 71.5 µm wide, corona 35.75-64.95 µm long, 42.75-85.8 µm wide at base, often unequal, connivent, slight spreading; oospore light brown, subglobose, 228.8-243.1 µm long and 200.2-221.65 µm wide, ridges 6; membrane reticulate; antheridium 178.75-314.6 µm in diameter.

Taxonomic enumeration: *Nitella polycarpa* Pal, 1932. Jour. Linn. Soc. London, Bot. 49.77, Pl. 13 (Pl. 1 Figs. 1-11; Pl. 2 Figs. 1-12).

Synonym: *N. mucronata* subsp. *furcata* f. *polycarpa* (Pal) Wood, 1962. Taxon 11: 18.

(Zaneveld 1940, 100; Wood and Imahori 1965, 484, Icon 245; Pal *et al.* 1962 71, Figs. 118-123).

Additional remarks: As per Wood and Imahori (1965) forma *N. mucronata* subsp. *furcata* f. *polycarpa* (Pal) Wood may not be considered as an individual type as Zaneveld (1940) did not examine the specimen himself. And he further commented that Pal (1932) did not give proper description of this specimen, as his drawings did not match properly with the description. He pointed out about the presence of mucus in oogonia as incorrect. During the present study no mucus was observed. Pal *et al.* (1962) further gave detailed description with drawings but did not mention about mucus (www.zsienvi.in/biodiversity_wb/Flora/2%algae.rtf).

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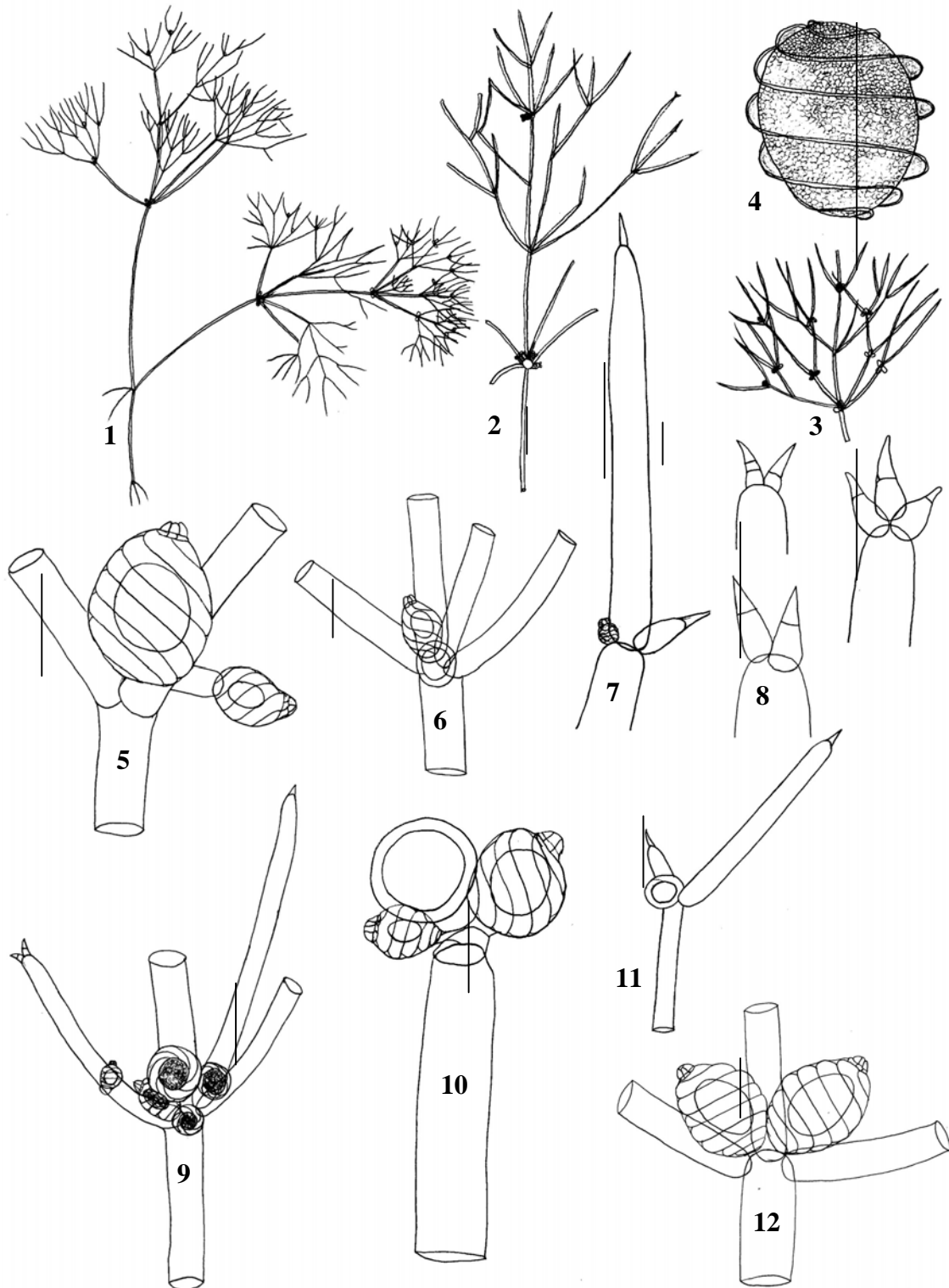


Plate 1. *Nitella polycarpa* Pal. 1-2. Habitus 3. Upper portion of a plant 4. Oospore 5. A stalked oogonium (aberration) 6. Gametangia 7. Unequal dactyls 8. 2-celled, 3-celled dactyls 9. A node with aggregated oogonium and antheridium 10. Gametangia 11. Antheridium and unequal dactyls 12. Geminete oogonium. (Scales = 0.2 mm)

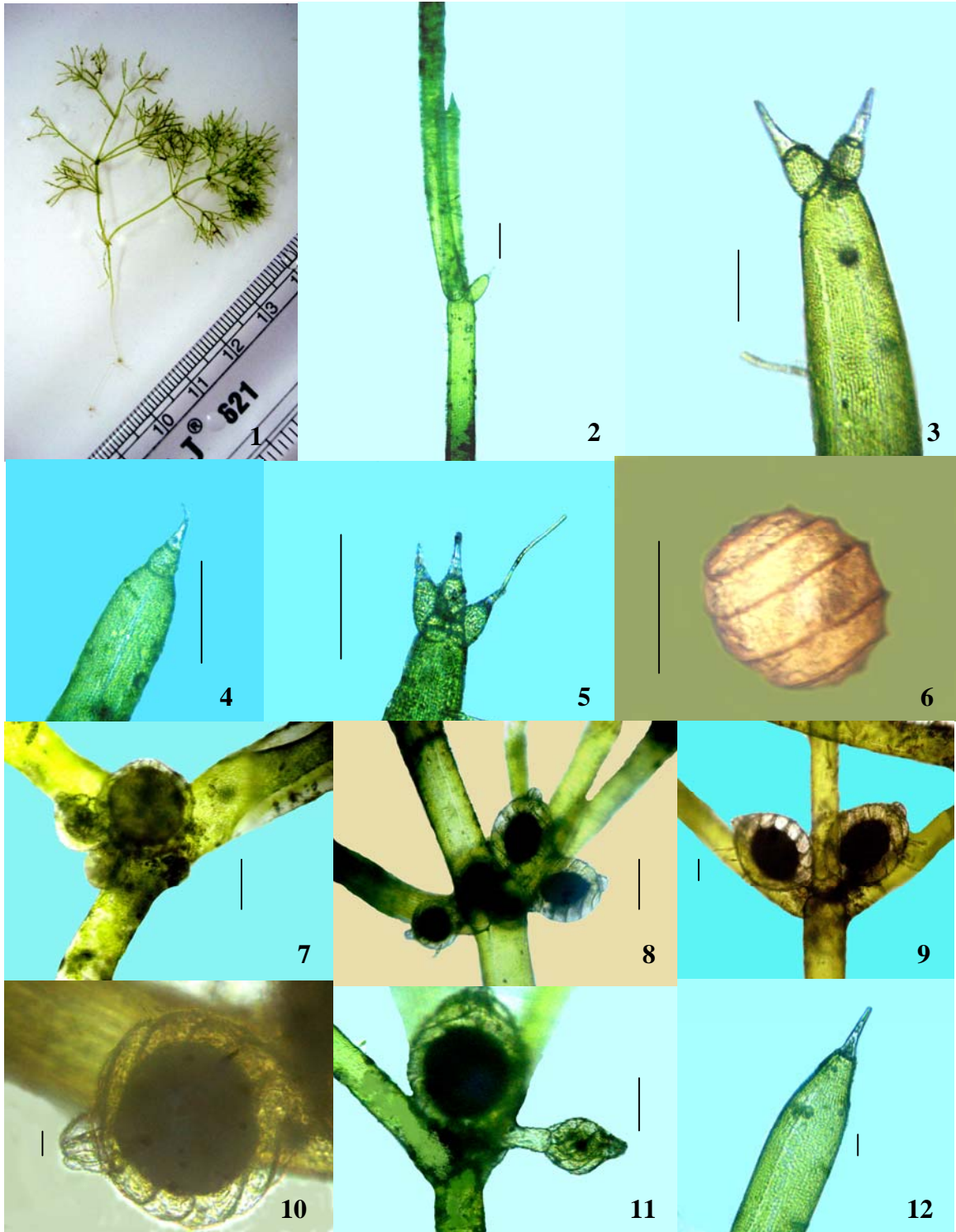


Plate 2. *Nitella polycarpa* Pal. 1. Habitus; 2. Unequal dactyls; 3-5 and 12. Different types of dactyls; 6. Oospore; 7. Gametangia; 8. A stem node and aggregated oogonium; 9. A branchlet node with geminate oogonium; 10. Oogonium; 11. A long stalked oogonium (Aberration). (Scales = 0.2 mm).

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