

AN UNUSUAL FLAT SPECIES OF *CODIUM* (CODIALES-CHLOROPHYTA) FROM THE COAST OF PAKISTAN

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Abstract

A new species, *Codium gerloffii* has been described from the coast of Pakistan, which differs from other species of the genus in being unusually flat in form.

Introduction

A large number of specimens were collected from the coast of Pakistan among which an unusual form of flattened *Codium* species was discovered. So far 2 flat species were described from this region (Nizamuddin, 1997; 1999) and one from Bombay, India (Dixit, 1940). This new alga *C. gerloffii* Nizamuddin, being unusual in shape and form is named after Prof. Dr. J. Gerloff, of Botanischer Garten und Botanisches Museum, Berlin-Dahlem for his devotion and contributions to the field of algae.

Materials and Methods

A large number of collection of *Codium* were made and fixed in 4% formalin and seawater solution. Some specimens were mounted on herbarium sheets and kept in KUH. Specimens were teased and stained in 1% K1 solution. Camera Lucida drawings were made.

Results

Codium gerloffii Nizamuddin *sp. nov.*

Holdfast conico-discoid up to 1.5 cm diam., stipe erect stout up to 1 cm high, compressed up to 1.5 cm broad, bifurcate-divaricate. Thallus (Fig.1) erect up to 8 cm high, throughout flat expanded up to 1 cm broad, fan-shaped di- or polychotomously branched (4-6 orders); dichotomies flattened up to 2.5 cm broad; axils divaricate. Tip of thallus flat and expanded also proliferous. Thallus dissecting out into individual utricles. Utricles slender, cylindrical, sub-clavate bulging or constricted in middle or variously shaped (1) from tip of thallus (Fig. 2A), 3096-944 (-1148) μm long and (77-) 102-383 (-408) μm diam.; L/B (2.1-) 2.7-6.6 (-10) μ , (2) from middle of thallus (Fig.2B), 765-949 (-1479) μm long and (77-) 128-383 μm diam. L/B 3.2-6.6 (-10); (3) from stipe of thallus (Fig.2C), 255-765 (-849) μm long and (77-) 128-408 (-510) μm diam., L/B (1.8-) 2-4.8 (-6.6), apices round, narrow, flat, utricular wall 2-3 μm thick



Fig.1. *Codium gerloffii* Nizam. sp. nov. Habit of the Holotype. No.KU 1226 (Leg. M. Nizamuddin, 13-4-1995 Drift).

at apex. Hairs or hair-scars few 63-125 μm below apex medullary filaments 25-50 μm diam. Gametangia stalked (Fig.2D), papillate, fusiform, oblong ovate, cylindrical, or broad at apex, variable in size and positions throughout thallus except stipe. Gametangia 2 per utricle in tip region (Fig.2E), 188-313 μm below apex 175-225 μm long and 50-65 μm broad; L/B 2.8-3.7. Gametangia 1 per utricle from other regions, 312-375 μm below apex, 408-510 μm long and 65-90 μm broad; L/B 2.5-3.2.

Holotype: Buleji (Leg. M. Nizamuddin, 13-4-1995 Drift, KU 1226)

Locality: Manora (Leg. M. Nizamuddin, 31-12-1986 drift, N-630; 11-2-1987 Drift, N-631). Buleji (Leg. M. Nizamuddin, 6-1-1987, 2-4-1987, 20-4-1987, Drift, KU Leg. Miss Aisha Khan, 14-11-1993 Drift No. N-632; 30-11-1993 N-633, mid-littoral muddy rocks) Sandspit (Leg. M. Nizamuddin, 20-4-1987 Drift).

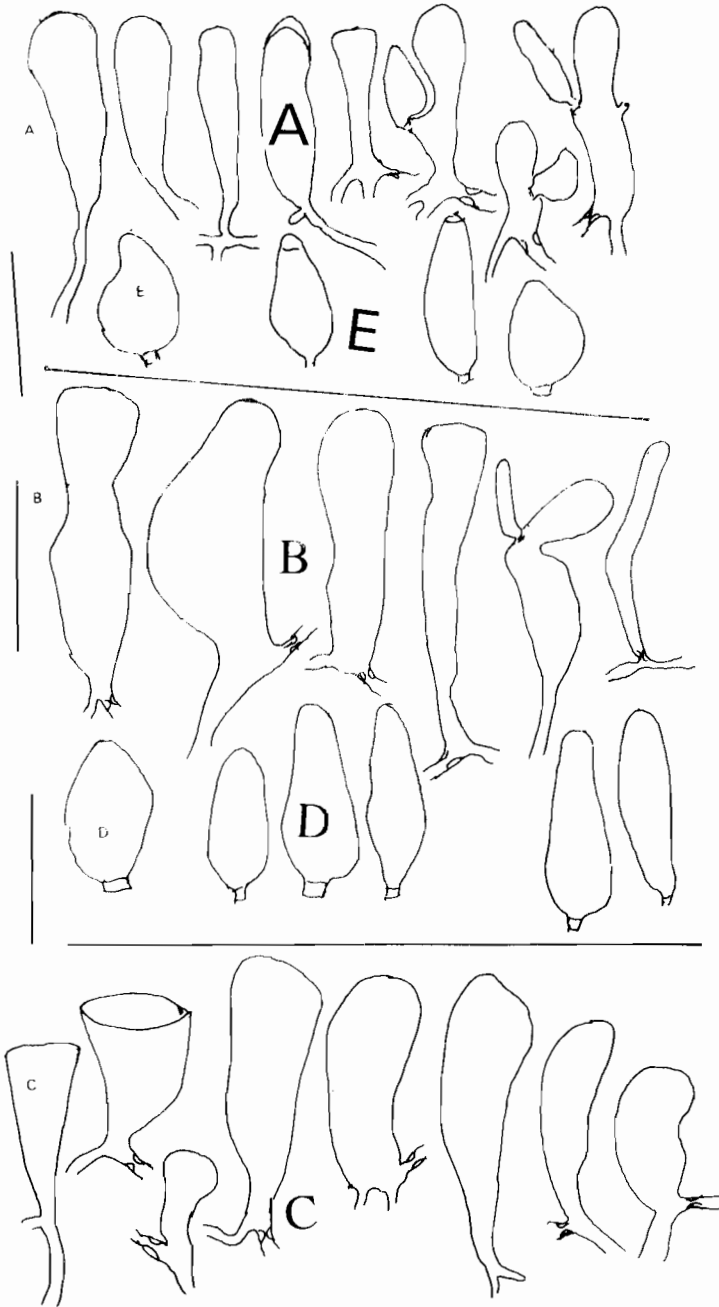


Fig.2 A-E. Internal structure of the species. C) Utricles from stipe of thallus. Scale = 500 μ m. A) Utricles from the tip of thallus, Scale = 500 μ m. D) Gametangia from mid part of thallus: Scale = 200 μ m. B) Utricles from mid part of thallus, Scale = 500 μ m. E) Gametangia from the tip of thallus, Scale = 200 μ m.

Diagnosis: *Codium gerloffii* Nizam. *sp. nov.* resembles other flat species of *Codium* in general habit but differs in an unusual form of thallus in shape of utricles and gametangia.

Codium gerloffii similis aliis planis speciebus codium in generalis habitibus sed differt infrequens forma thallus in utriculi forma et gametangia.

Acknowledgement

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