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NON- OCCURRENCE OF *CYSTOSEIRA* KÜTZING OF THE NORTHERN-ARABIAN COAST (PAKISTAN)

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ABSTRACT

Stokeyia indica is endemic to north Arabian Sea coast. It is dioecious, oogonia branch and segmented. The development of vesicles in the ultimate vegetative branchlets.

Keywords: *Stokeiya*; seaweeds; morphology; north Arabian Sea.

INTRODUCTION

Three more genera, *Stokeyia* Thivy and Doshi from India (1966), *Cladophellum* Bula Meyer Colombia (1980) and *Nizamuddinia* from Masqat Silva (*sargassposis*) Nizamuddin et al. (1993) are included in Fucales. Nizamuddin (1962, 1970) described the classification and phytogeography distribution of fucales. Represent study deals with morphology and taxonomic of *Stokeyia indica* Thivy and Doshi.

MATERIALS AND METHODS

Specimens were collected either attached or as drift and mounted on herbarium sheets. Some were preserved in 4% formalin-seawater solution (containing ca 2% commercial formaldehyde) for further study or mounted on herbarium sheets and deposited in the Algal Herbarium, Botany department, University of Karachi. Anatomical studies were made on freehand sections which were stained in .5% methylene blue. Photographs have been taken by camera and drawings were made with help of a camera lucida. Specimens are kept in the Algal Herbarium, Botany Department, University of Karachi.

***Taxonomic enumeration*:**
Stokeyia indica Thivy et Doshi (1966), 64-66.
Synonym: *Cystoseira indica* (Thivy et Doshi) Mairh 1967:78-83; Afaq et Shameel 1999: 593-598.

Growth:
Apical growth by means of three sided apical cell as well as vegetative growth occurs from haptoroid branches near hold fast.
Plants erect, thin, flexuous (fig.1& 2), dioecious, dark brown, filiform, up to 38 (-43) cm high and 1mm broad. Main axes distinct, cylindrical, thin, alternately branched. Hold fast haptoroid. Plant caespitoles 3-7 individuals.
Primary axes alternate, flexuous, up to 2.5-9.0cm long, .2mm broad, cylindrical. Secondary axes up to 3cm long, up to 0.2mm across, alternately branched into tertiary and quaternary axes. Apex bilobed, smooth, naked, acute. Primary and secondary branches bearing vesicles (fig.3), stalked, cylindrical, apiculate 2-3cm long and .5-1cm broad. Apiculum simple or furcate. Receptacles stalked cylindrical, branched, smooth, 12-16mm long and .75mm broad. Male receptacles usually forked once or twice, with forks 3-8mm long, .5mm diam. Antheridia (fig. 4) single or two, on unicellular stalk. Female receptacles branched spirally, or divaricate, with segments 5mm long, .4-.6mm diam., with conceptacles with uniovulate oogonia (fig. 5). Paraphyses simple present in the conceptacles.

Specimens examined: Karachi: Buleji (leg. Sadaf Gul 27.02.06, 7.9.06); Manora (leg. Asma 15.02.07, 10.03.07).

DISCUSSION

Plants growth tufts in mid littoral rocky pools and grow with in association with *Sargassum* spp; *Padina* spp, *Ulva* and epilithic. The genus *Stokeyia* was first described by Thivy and Doshi 1966, from Indian coast.

Distribution of *Cystosiera* in Mediterranean Sea and Californian coast (pacific Coast). Few species of *Cystosiera* from Mediterian Sea migrated to Moroccan western coast of and few to British Ils. It has been wrongly described from northern Arabian coast.

Fig.1

Fig. 3

Fig. 2

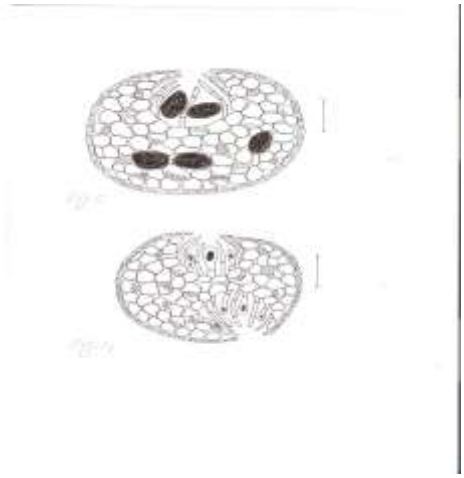

Fig.4 & 5.

Fig. 1. Habit of Male Plant *Stokeyia indica.*
Fig. 2. Habit of Female Plant *Stokeyia indica.*
Fig. 3. Variation in form of vesicles.
Fig. 4. Male conceptacle showing paraphysis with antheridia. Scale 100µm.
Fig. 5. Female conceptacle showing paraphysis with oogonia. Scale 100µm.

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