

## A NEW SPECIES AND A NEW VARIETY OF *AMPHISOLENIA* STEIN FROM THE NORTH ARABIAN SEA BORDERING PAKISTAN

Sehba Mansoor and S.M. Saifullah

Department of Botany, University of Karachi, Karachi-75270, Pakistan.

**ABSTRACT:** A new species *Amphisolenia nizamuddinii* Mansoor and Saifullah *sp. nov.* and a new variety *Amphisolenia schroederi* var. *pakistanensis* Mansoor and Saifullah *var. nov.* are hereby described from Pakistan's shelf and deep sea vicinity during the transition period between the northeast and southwest monsoon seasons.

**KEY WORDS:** *Amphisolenia* - north Arabian Sea - Pakistan shelf.

### INTRODUCTION

*Amphisolenia* Stein is a marine planktonic dinoflagellate that occurs preferably in warm waters (Paulsen, 1908; Kofoid and Skogsberg, 1928; Lindemann, 1928; Wood, 1963; Taylor, 1976). During an oceanographic cruise, onboard the "Dr. Fridtjof Nansen" in 1977, in the north Arabian Sea bordering Pakistan, a new species and a new variety of *Amphisolenia* Stein were discovered. Earlier work by Saifullah and Hassan (1973) in the area revealed seven species from a strictly inshore area, the Karachi harbour, of Pakistan.

The present paper reports only the description of the two new taxa collected during the transition period between the northeast and southwest monsoon seasons in the area.

### MATERIAL AND METHODS

The materials, methods and cruise tracks, with station numbers, have been described in detail elsewhere (Anonymous, 1978; Saifullah, 1979; Chaghtai and Saifullah, 1988) and, therefore, there is no need of repetition here.

### SYSTEMATIC ACCOUNT

*Amphisolenia nizamuddinii* Mansoor and Saifullah *sp. nov.*

(Fig.1)

#### DIAGNOSIS

*Corpus rectus usque ad 670 x 20 µm et, collus et corpus medius comparatus brevissimus 0.056-0.23 plo pro longitudinus antapicalus longus rectus 0.7 plo pro longitudines corpus antapex levitex expansus cum tres acutus spinulus duous in dexterus et unus in sinisterus valvus, uno parvus subterminales projecturus adsum prop antapex in dexterus valvus.*

#### DESCRIPTION

Body straight, up to 670 µm long, 20 µm wide; neck and midbody comparatively very short, being 0.056 and 0.23 times the length of the entire body respectively; ant-

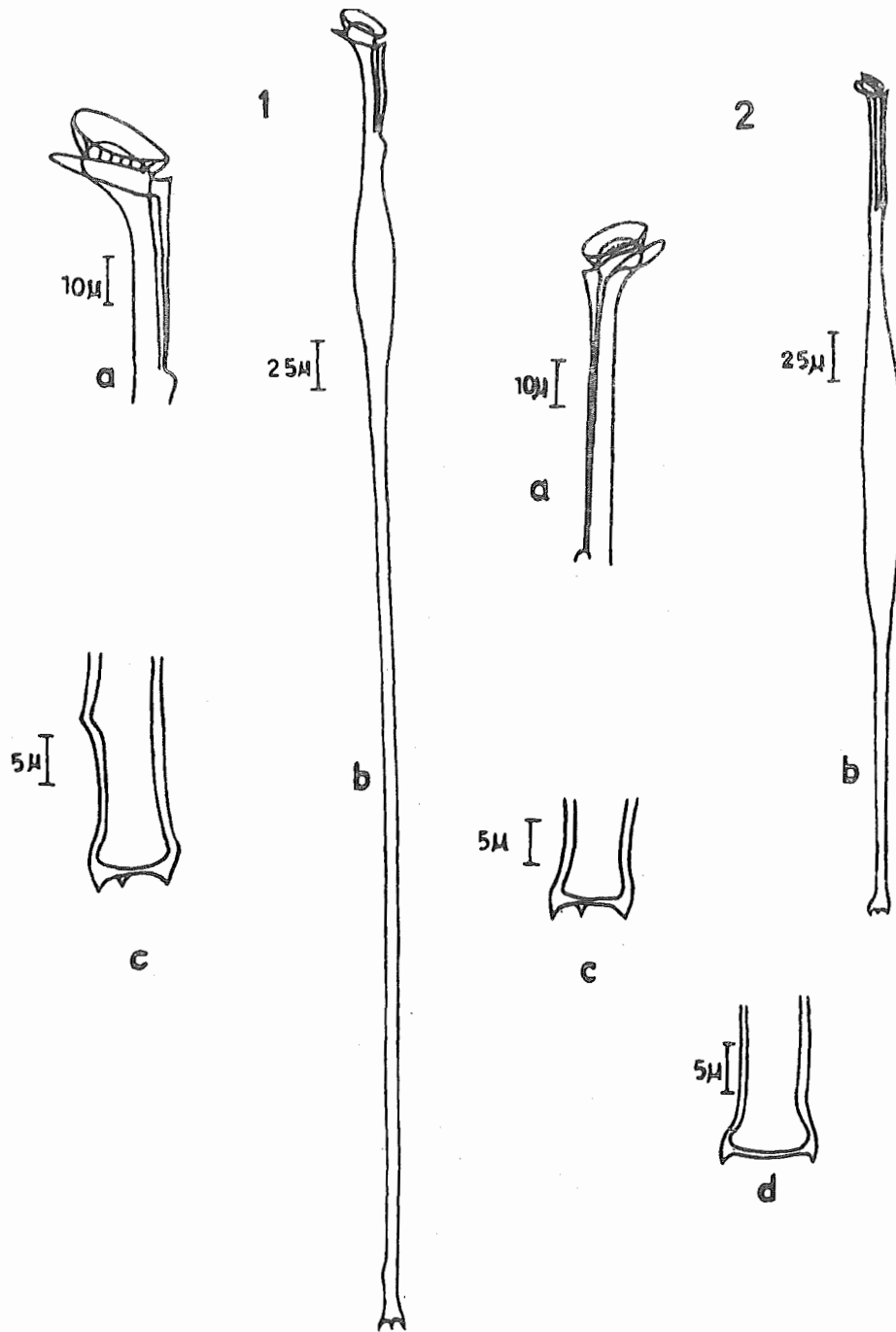


Fig.1. *Amphisolenia nizamuddinii* sp. nov.; a) head and neck, b) entire specimen, c) antapex, right lateral view.

Fig.2. *Amphisolenia schroederi* var. *pakistanensis* var. nov.; a) head and neck, b) entire specimen, c) antapex right lateral view, d) antapex dorsal view.

apical long and straight, 0.7 times the length of body; antapex slightly expanded with three pointed spinules, two on right and one on the left valve; a small pointed subterminal projection present near the antapex on the right valve.

The species resembles *A. rectangulata* Kofoid and *A. bispinosa* Kofoid in general features and dimensions of the body, but differs from them significantly in possession of a subterminal projection and 3 terminal spinules. It is named after Dr. M. Nizamuddin in recognition of his outstanding contribution in the field of marine algae, specially with reference to Pakistan.

**Local distribution:** Station Nos. 129 (28.2.77), 233 (17.4.77), 276 (4.5.77) and 279 (5.5.77).

**Iconotype:** Fig.1.

**Type locality:** Station No. 233 (23°17'N; 67°05'E).

**Temperature range:** 24.0-28.2°C.

*Amphisolenia schroederi* var. *pakistanensis* Mansoor and Saifullah var. nov.

(Fig.2)

**DIAGNOSIS**

*Differs Amphisolenia schroederi* Kofoid var. *typicus* in *ters distinctus spinulus, duo in dexterus et uno in spinisterus valvus.*

**DESCRIPTION**

It differs from the type species *Amphisolenia schroederi* Kofoid in possessing three distinct spinules, two on right and one on the left valve.

**Local distribution:** Station Nos. 129 (28.2.77), 234 (17.4.77), 261 (26.4.77), 271 (3.5.77), 298 (9.5.77), 300 (23.5.77), 301 (23.5.77), 304 (23.5.77) and 305 (23.5.77).

**Iconotype:** Fig.2.

**Type locality:** Station No.234 (23°10'N; 66°52'E)

**Temperature range:** 25.0-28.5°C.

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