

ABSTRACTS\*

1. Mangrove Plants, Sea Grasses and Benthic Algae at Surin Island in the Andaman Sea off the West Coast of Thailand. *Bo Christensen*<sup>1</sup> and *Søren Wium-Andersen*<sup>2</sup>

A collection of marine plants was made in April 1976 during an expedition to Surin Island. Algae were collected by Scuba diving down to a depth of 30 metres. The list of algae is only tentative. A total of 39 species of benthic algae were identified: 2 Cyanophyceae, 14 Rhodophyceae, 4 Phaeophyceae and 19 Chlorophyceae. Further 2 species of seagrasses and 7 species of mangrove trees were recorded. Of the 39 recorded algal species the following 13 are new to Thailand:

Cyanophyceae:

*Symploca hypnoides* GOMONT 1893

Rhodophyceae:

*Porpyra* sp.

*Galaxaurea vietnamensis* DAWSON 1954

*Amphiroa foliacea* LAMOUREUX 1824

*Titanophora pulchra* DAWSON 1954

*Dasya pedicellata* (AG-) C. AGARDH 1824

*Dasyopsis pilosa* WEBER VAN BOSSE 1923

*Lophosiphonia villum* (J. AGARDH) SETCHELL and GARDNER 1903

Chlorophyceae:

*Anadyomene wrightii* GRAY 1866

*Bryopsis pennata* LAMOUREUX 1809

*Avrainvillea amadelpa* (MONTAGNE) GEPP

*Caulerpa serratula* (FORSKAL) J. AAGRDH *emend.* BØRGENSEN 1932

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**2. Primary Production in the Waters around Ko Surin Island off the West Coast of Thailand. Søren Wium-Andersen<sup>1</sup>**

Primary production was measured by means of the C-14 method, 1/2 days experiments, twice at a station in the southern bay of the northern Surin island and once at a station 15 miles west of the islands in the Andaman sea. In the last station a production on 690 mg C/m<sup>2</sup>/day<sup>-1</sup> was measured on the 14th. of April 1976. G-24 max. was 24mg C/m<sup>3</sup>, and the depth of the photosynthetic layer 60 metres. The production in the bay was measured on the 13th. of April to 1.09g C/m<sup>2</sup>/day<sup>-1</sup> and on the 17th. to 1.45g C/m<sup>2</sup>/day<sup>-1</sup>. On the latter date a blue-green algae maximum was observed. The photosynthetic layer in the bay was 30metres and G-24 max.: 85mg C./m<sup>3</sup>. The results show that the land run off and the regeneration of nutrients in the shallow bay have a strong influence on the primary production. Net phytoplankton >30μ were dominated by blue-green algae and diatoms, a few Dinophyceae were also seen.

Although few measurements were taken, results indicate an area with a relatively high primary production.

**3. A Preliminary List of Macrofauna from a Mangrove Forest and Adjacent Habitats on Ko Surin, Peninsular Thailand. Dawn W. Frith<sup>2</sup>**

The macrofauna of a mangrove forest in a sheltered bay on Ko Surin Nua of the Ko Surin group was investigated and compared to that of the adjacent sand and mud flats. The mangrove forest consisted of trees *Bruguiera gymnorrhiza*, *Rhizophora apiculata* and *R. mucronata*. The mangrove macrofauna found consisted of thirty five species, namely a coelenterate species, a sipunculid species, polychaetes (3 species), crustaceans (14 species), an insect species, molluscs (14 species) and fishes (2 species). The crustacean fauna consisted of an isopod species, an amphipod species, anomuran decapods (4 species) and brachyuran

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decapods (8 crab species). The crabs consisted of a xanthid species, ocypodids (2 species) and grapsids (5 species). The molluscan fauna consisted of eight species of gastropods and six species of lamellibranchs. Gastropods were represented by families Trochidae, Neritidae, Littorinidae, Cerithiidae, Muricidae and Ellobiidae. Lamellibranchs were represented by families Mytilidae, Isognomonidae, Ostreidae, Veneridae and Teridinidae.

Only one species, a fiddler crab *Uca lactea annulipes*, occurred in both mangrove and sand flat habitats, and this lack of mangrove dwelling animals in other habitats, therefore, emphasises the characteristic nature of such a macrofauna at this locality. In composition the mangrove macrofauna was similar to that described for other localities in the Indo-West-Pacific region.

Zonation of species was investigated using belt transects and these findings are discussed with comparative notes on similar macrofaunas from Phuket Island, Peninsular Thailand.

**4. Observations on Fiddler Crabs (Ocypodidae: Genus *Uca* on Ko Surin, Peninsular Thailand, with Particular Reference to *Uca tetragon* Herbst. Dawn W. & C.B. Frith\***

Fiddler crab populations of a mangrove and adjacent sand and mud flats were investigated in a sheltered bay of Ko Surin Nua of the Ko Surin group. The mangrove forest consisted of trees *Bruguiera gymnorhiza*, *Rhizophora apiculata* and *R. mucronata*. Four species of *Uca* were identified. *Uca dussumieri dussumieri* was found exclusively within the more seaward part of the mangrove forest among *R. apiculata* and *R. mucronata* trees, predominantly in muddy substrates of relatively open areas. Where *U.d. dussumieri* was found in sandier substrates, however, it was sympatric with *U. lactea annulipes*. It is noteworthy that the presence of this species represents an extension of the distributional range given by Crane (1974) for this species. *Uca lactea annulipes* was

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found in sandier substrates throughout the mangrove forest, and the more landward areas of the sand flat where it was sympatric with *U. tetragon*. *Uca tetragon* occurred exclusively on the sand flat, and in areas where the substrate became muddier, *U. tetragon* populations were sparser and were there sympatric with *U. vocans vocans*. Populations of *U. v. vocans* were denser on the more seaward mud flat. Thus, *U. tetragon* and *U. v. vocans* populations met where their respectively favoured microhabitats converged, and where both species were sparser than in their more typical microhabitat areas.

The population structure of the *U. tetragon* colony was examined by a belt transect, and the results are discussed.

**5. A Preliminary List of Intertidal Animals from a Sandy Beach, Rocky Shore and Coral Reef at Ko Surin, Peninsular Thailand. *Pensri Boonruang*\***

A collection of intertidal animals from a sandy beach, rocky shore and coral reef was made at low tide at Ko Surin, Peninsular Thailand between 12–16 of April 1976. The animals found consisted predominantly of molluscs and to a lesser extent crustaceans.

The molluscan fauna consisted of 34 species of gastropods 38 species of lamellibranchs and an amphineuran species. The gastropods were represented mainly by members of families Neritidae and Conidae. The lamellibranchs were represented mainly by members of families Veneridae, Arcidae and Mytilidae. The crustacean fauna consisted of synalpheid prawns (2 species), brachyuran decapods (6 crab species) and stomatopods (4 species).

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6. **Two Species of Freshwater *Neritidae* (*Gastropoda*, *Prosobranchia*) New for the Fauna of Thailand from Ko Surin Island in the Andaman Sea.**  
 *Gudrun Wium-Andersen\**

Two species of *Neritidae* (*Gastropoda*, *Prosobranchia*) new to the fauna of Thailand were found on an expedition to Ko Surin Islands in April 1976, which was arranged by the Siam Society. These species were not by Brandt (1974). The two species are :

1. *Neritina* (*Vittina*) *turrita turrita* (Gmelin, 1791) fa. *semiconica* Lamarck, 1822.
2. *Clithon* (*Clithon*) *peguensis* (Blanford, 1867).

The species were found in a *Bruguiera* mangrove forest in a south facing bay on the most northern of the Ko Surin Island group. The snails were found crawling around on the roots of *Bruguiera* trees in a small freshwater stream, which occasionally was mixed with saltwater at high spring tide. The species *Neritina* (*Vittoidea*) *variegata* Lesson, 1831 was also found at the same locality with the two above species.

The material was kindly identified by Dr. H.K. Mienis from the Zoological Museum, The Hebrew University, Jerusalem, Israel.

Reference: Brandt, R.A.M., 1974: The non-marine aquatic mollusca of Thailand, *Archiv f. Molluskenkunde*, 105 : 1-423.

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