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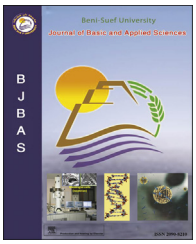

Full Length Article

Contributions to the study of the marine algae inhabiting Umluj Seashore, Red Sea

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ABSTRACT

The marine algal flora of the Umluj city received no attention about the marine macroalgae. In this paper a total of 19 species are reported for the first time as occurring in the Umluj coast of Saudi Arabia. These species related to Chlorophyta (1), Phaeophyceae (6) and Rhodophyceae (12).

1. Introduction

Floristic composition of aquatic algal flora, their distribution and sequence of periodicity can be used in evaluating ecological changes. This is of special significance as the marine environment was subjected to considerable alternation during the last decades. These changes were intensively monitored (Haroun et al., 1995). The Red Sea has been a region of natural history exploration by European

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Plate 1 – Map showing the study area [Al Harrah, An Nasbah, Al Qars, Ad Dqam, Ash Shaban (N) and Ash Shaban (S)], Umluj, Red Seashore, Saudi Arabia, where samples were collected.

Table 1 – Description and location of collecting sites.

Site number	Site description	Coordinates
1	Al Harrah	25°12′28.24″N 37°12′34.08″E
2	An Nasbah	25°9 ′51.81″N 37°15′ 7.00″E
3	Al Qars	25°8 ′1 0.81″N 37°15′47.94″E
4	Ad Dqam	25°43′ 4.59″N 37°14′58.27″E
5	Ash Shaban(N)	24°45′54.20″N 37°12′36.58″E
6	Ash Shaban(S)	24°44′24.14″N 37°13′ 7.72″E

scientists from about 240 years. The first record of marine algae in the Red Sea was by Strand (a pupil of Linnaaeus's), who in his thesis on the flora of Palestine listed three species (Papenfuss, 1968). The first person to collect marine algae from the Saudi Arabian Red Sea Coast, was the Danish botanist and explorer in the 18th century by Forsskal who, in the month of November 1762, made a collection of

Table 2 – Test methods details for the water analysis.

No.	Tests	Method reference
1.	Temperature	–
2.	pH	AOAC-973.41 (2005)
3.	Total Dissolved Solids (TDS)	Standard methods (1985)
4.	Bicarbonates	Standard methods (1985)
5.	Total chloride	Standard methods (1985)
6.	Sulfate	AOAC 925.54 (2005)
7.	Nitrate	Standard methods (1985)
8.	Calcium	AOAC-974.27 (2005)
9.	Magnesium	AOAC-974.27 (2005)
10.	Sodium	AOAC-973.54 (2005)

Table 3 – The recorded macroalgal species collected from the studied area along 52 km during Spring, 2011 on Umluj Seashores.

No. of algal sample	Algal species	Division	Water depth
1	*Enteromorpha intestinalis*	Chlorophyta	0.5–1 m
2	*Padina pavonia*	Phaeophyta	0.5–5 m
3	*Cystoseira myrica*	Phaeophyta	1–1.5 m
4	*Cystoseira trinodis*	Phaeophyta	1 m
5	*Colpomenia sinuosa*	Phaeophyta	1–1.5 m
6	*Turbinaria ornata*	Phaeophyta	1–2 m
7	*Sargassum latifolium*	Phaeophyta	1–2 m
8	*Laurencia majuscula*	Rhodophyta	17–44 m
9	*Laurencia catarinensis*	Rhodophyta	1–10 m
10	*Laurencia papillosa*	Rhodophyta	1–1.5 m
11	*Laurencia* sp.	Rhodophyta	20–44 m
12	*Laurencia* sp.	Rhodophyta	17–42 m
13	*Liagora hawaiiana Butters*	Rhodophyta	1–1.5 m
14	*Hypnea bryoides Børgesen*	Rhodophyta	0.5–1 m
15	*Palmaria palmate*	Rhodophyta	0.5–1 m
16	*Galaxaura rugosa*	Rhodophyta	1–1.5 m
17	*Gracilaria arcuata*	Rhodophyta	0.5–1 m
18	*Acanthophora spicifera*	Rhodophyta	0.5–1 m
19	*Digenia simplex*	Rhodophyta	1–1.5 m

seaweeds from the Sea of Jeddah. Forsskal headeda Danish Expeditionof 6 scholars to Egypt and Arabia. In the early years of the 19th century a British admiral Viscount Valentia made collections of algae from Red Sea and these were described by Turn in the 17th century (Mohamed et al.,