

THE EFFECTS OF SALINITY ON THE GROWTH AND  
SOME MORPHOLOGICAL AND ANATOMICAL CHARACTERS  
OF *ENTEROMORPHA FLEXUOSA* (L.) GREV.

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Faculty of Fisheries and Marine Science  
UNIVERSITI PERTANIAN MALAYSIA  
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A Project Report submitted as partial fulfillment  
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FAKULTI PERIKANAN DAN SAINS SAMUDRA

BORANG PENGESAHAN

Dengan ini disahkan bahawa kami yang bertandatangan di bawah ini telah membaca dan berpuas hati menerima laporan projek penyelidikan yang bertajuk:

THE EFFECTS OF SALINITY ON THE GROWTH AND

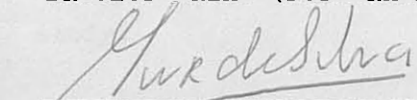
SOME MORPHOLOGICAL AND ANATOMICAL CHARACTERS

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yang disediakan oleh:

ROHANI MOHD. ROSE

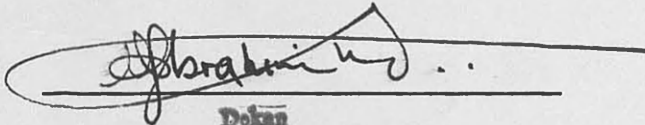
sebagai sebahagian daripada keperluan untuk mendapatkan Ijazah Bachelor Sains (Perikanan).

  
DR. M. W. R. N. DE SILVA

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Tarikh: 4/4/03



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Rohani Mohd. Rose.

## ABSTRACT

In algal taxonomy, the identification of plants would depend on the selection of taxonomic characters which are stable under varying environmental conditions.

The purpose of the present investigation was to determine the effects of salinity on the growth and some morphological and anatomical characters of E. flexuosa. Some of these taxonomic characters were tested by culturing plants collected from the intertidal beach at Port Dickson, Negeri Sembilan under varying conditions of salinity. The characters employed were those generally accepted to be taxonomically valid by Bliding (1964).

Salinity was chosen as the variable environmental factor due to several constraints especially time and available facilities. Zoospores obtained from mature thalli were cultured in Erd-Schreiber's medium of salinities varying from 8<sup>o</sup>/oo to 28<sup>o</sup>/oo and grown under controlled conditions of temperature and illumination for 5 weeks in culture.

The results obtained from the present investigation on tropical species of E. flexuosa seemed to indicate that changing salinities has a very significant effect on the characters especially the length of germlings and cell size of plants. However, with increasing salinities it was observed that a significantly better growth rate was favoured in the plant length, cell size and number of branched offsprings produced. The pyrenoid number per cell was not significantly affected by changes in salinity. An interesting point to note here was that an

increase in salinity of culture medium was accompanied by an increase in the number of branched offsprings produced which was the reverse to those obtained from experiments conducted on the temperate species of E. flexuosa by De Silva (1969). A possible explanation for this might be because the character of branching has been genetically established, at least for the plants used and the particular area selected.