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## Contents

	<b>Page</b>
<b>The Study of Fresh Water Algae from Kantharyar Lake, Pathein Township</b> <i>Nyar Kyi, Mon Mon Lwin and Khin Min Min Phyo</i>	1
<b>The Study of Selected Hydrophytes in Lake-pya-kan, Bago Township</b> <i>Kyi Nyunt, Aye Mie Myat and San Nu</i>	25
<b>Some Algae of Three Artesian Wells found in Ywathayar Village, Yinmarpin Township (Monywa District)</b> <i>Theingi Htay</i>	37
<b>Fresh Water Algae Found in Kalay University Campus and its Surrounding Areas</b> <i>Moat War Dine Naw and Thein</i>	53
<b>A Study on Usefulness of Some Woody Plants in Mon State</b> <i>Eh Khu Hpaw, Win Win Nwe and Myo Hteik Aung</i>	63
<b>A Study on Dyes Extracted from Natural Pigments of Some Resource Plants in Magway Township</b> <i>May Than Su, Pa Pa Win, Kyaw Swe Lin and Thida Than</i>	85
<b>Study on the Relationship of Plant Resin and Myanmar Society</b> <i>Shwe Sin Ei</i>	101
<b>Study on the Cultivated Legumes in Taungthaman Lake and Its Environ</b> <i>Thai Thai Aye</i>	117
<b>Effect of Direct-seeding and Transplanting Methods on Rice Cultivar Manawthukha in Meiktila Township</b> <i>Nang Doi and Tun Chun</i>	133

	<b>Page</b>
Study of <i>Glycine max</i> Merr. on its Productions and Uses in Lashio Township <i>Swe Mar Tin, Thida Aung, Kay Thi Aung and Nang Mya Oo</i>	145
Ethnomedicines used by Mro Tribes in Kyauk-Taw Township, Northern Rakhine State for Gastrointestinal Disorder <i>Khin Thet Kyaw</i>	157
Some Edible Wild and Cultivated Plants Used as Food for Palaung Tribe in Kyaukme Township <i>Nyo Nyo Tin</i>	167
Genetic Diversity and Relationships Among the Myanmar Banana Varieties Using PBA Molecular Markers <i>Saw Yee</i>	183
Noncoding Plastid tRNA-Leu (trnL) Intron Region Sequences Report for Genetic Separation of <i>Cinnamomum spp.</i> from China and Myanmar <i>Khin Thantsin</i>	197
Culture of <i>Musa chiloearpa</i> Back. in Murashige and Skoog Liquid Medium For Shoot Proliferation and Cell Types <i>Cho Cho Nyunt and San San Aye</i>	209
Studies on the Antifungal Agent Isolated from <i>Solanum indicum</i> Linn. Applicable for the Specific Treatment for Mycosis <i>Moe Moe Aye and Nyunt Phay</i>	221
Production of Antibacterial Metabolite by <i>Lecanicillium waksmanii</i> MKN-09 <i>Moe Moe Aye, Khine Swe Nyunt and Nyunt Phay</i>	231
Antifungal Compound Isolated from Leaf of <i>Cassia fistula</i> L. (Ngu Shwe Wah) <i>Khine Swe Nyunt, Moe Moe Aye and Nyunt Phay</i>	239
Investigation on the Isolation of Soil Fungi from Different Soil in Dawei Township	247

	<b>Page</b>
<i>Mar Lar Aung, Thi Thi Moore and Tin Tin Aye</i>	
<b>Survey on Some Herbal Plants in Bago Yoma</b> <i>Than Than Htay, Mar Mar Aye, Mar Mar cho and Yin Yin Waing</i>	257
<b>Morphology and Preliminary Phytochemical Studies on Some Medicinal Plants Found in Pyay Area</b> <i>Thet Thet May</i>	269
<b>The Study of Some Medicinal Plants in Family Verbenaceae</b> <i>Tin Thaw Oo</i>	283
<b>Study on Some Medicinal Plants Concerning with Six Major Diseases (Phase I)</b> <i>Thandar Oo</i>	295
<b>Pharmacognostic Study on Fruits of <i>Terminalia catappa</i> L. (Banda fruit)</b> <i>Shwe Shwe Hla</i>	311
<b>Studies on Pollen Morphology of Some Flowers</b> <i>Tin Kyi Kyi</i>	323
<b>Preliminary Survey on Plant Species (Angiospermae) of Myeik Archipelago</b> <i>Nwe' Nwe' Yi</i>	337

## **The Study of Fresh Water Algae from Kantharyar Lake, Pathein Township**

Nyar Kyi<sup>1</sup>, Mon Mon Lwin<sup>2</sup>, Khin Min Min Phy<sup>3</sup>

### **Abstract**

For the study of freshwater algae, the materials were collected from Kantharyar Lake, Pathein Township, Ayeyawady Division. The algae collections were made fortnightly from December, 1998 to June, 2008. The algae samples were examined under the microscopes directly mounted on glass slides in water or 20% glycerin. Freshwater algae were classified and identified according to V.J. Chapman and D.J. Chapman, (1973); F.E. Fritsch, (1945); G.W. Prescott, (1962); and H. Skuja, (1949). In this survey, morphology of filamentous algae (5) genera, Desmid (12) genera and Diatoms (5) genera were described with the help of photographs.

### **Introduction**

Freshwater algae (microalgae) are photosynthetic organisms and they produce oxygen, while reducing carbon dioxide. As they are feed for fish and other aquatic organisms, they are at the beginning of food chains in nature.

Algae are not only used as vegetables and medicines, but they are also important as producers of phycocolloids and animal feeds. As the algae flora is one of the most important components of aquatic ecosystems, a preliminary survey of freshwater algae flora from Kantharyar Lake, Pathein Township area, was therefore conducted to provide basic information for further research.

In this survey, the materials were collected from Kantharyar Lake. It is situated in Pathein Township, Ayeyawady Division. It lies between Pathein University and Golf Club.

In this survey, occurrence and the morphological characters of filamentous algae (5) genera, Desmid (12) genera and Diatoms (5) genera are represented with photographic records.

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### **Materials and Methods**

The materials used in this present study were collected from Kantharyar Lake, Pathein Township. The algae samples were collected fortnightly from December, 1998 to Sep; 2008. Naga-Phayar, behind the golf club, near the swimming pool, Kantharyar bridge and excess-water channel were chosen as five collection sites.

The algae samples, growing floating and attached to submerged aquatic plants and other substrate were collected in visible state in natural habitat with collecting net or directly by hand using scalpels. Desmids and diatoms were collected by squeezing algae mats. A large handful of the algae mats were held over a wide-mouthed jar and squeezed thoroughly until nothing more drips into the jar.

Examination and identification of algae were made as soon as possible. Algae were deteriorated rapidly by lack of aeration.

Identification of algae were done only from living materials. Identification was based on morphological characteristics. The natural colours of algae specimens were also noted in natural condition. Seasonal and pH water temperature were also recorded. The algae samples were examined under the microscopes directly mounted on slide in water or 20% glycerin.

For the study of Diatom, in order to obtain clear and empty frustules, a bit of material was spread in a drop of water on a microscope slide. Then, the slide was held over a flame and the water was allowed to boil. After the smear was steamed for a few seconds, a drop of 5% glycerine was added (Prescott, 1964).

The samples were preserved in glass or plastic containers using preservatives. The preservative used was "six-three-one", made with six parts of water, three parts of 95% alcohol and one part of formalin (Prescott, 1964).

### Result and Discussion

**Order** - Oedogoniales

**Family** - Oedogoniaceae

**Genus** - *Oedogonium*

**Species** - *Oedogonium Pringsheimii* Cramer,

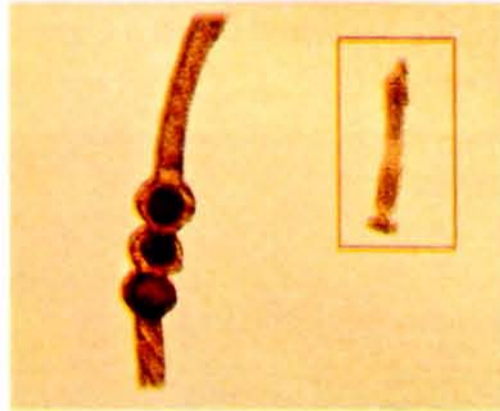


Plate. ( 1 ). Fig.( 1 )

Macrandrous type. Plants dioecious. Vegetative cells cylindrical, 100 -120 $\mu$  long, 18 - 20 $\mu$  broad. Oogonia 3 to 6 globose, division superior, 35 $\mu$  long, 30 - 35 $\mu$  in diameter.

Oospore filling the oogonia, wall smooth and thick, 35 - 36 $\mu$  long, 35 - 36 $\mu$  broad.

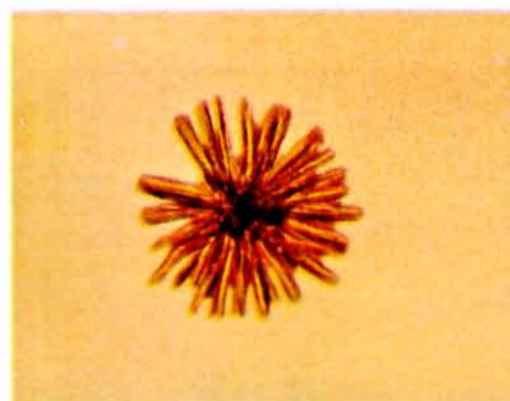
Antheridia 8 - 9 $\mu$  long, 10 $\mu$  broad.

**Order** - Chlorococcales

**Family** - Oocystaceae

**Genus** - *Ankistrodesmus* (Corda.)

**Species** - *Ankistrodesmus falcatus*



(Corda). Plate.(1). Fig. ( 2 )

Cells colonial, dense aggregate, compost of 4 – 30 truncate fusiform cells, radiating in all planes from a common center, not enclosed by a colonial envelope, cells sharply pointed, 18 - 30 $\mu$  long, 2.5 – 3.5 $\mu$  broad.













































