

British Phycological Society

NEWSLETTER

MAY 1975

PLS B 8.

WENTY-THIRD ANNUAL MEETING, GOLDSMITH'S COLLEGE 2 - 4 JANUARY, 1975

The Department of Biological Sciences at Goldsmith's College was the meeting place, with Dudley Richardson the Local Secretary, ably assisted by Steve Whittle. As I explained last year, the January 1st Bank holiday now makes the timing of our winter meetings difficult, and this one had to fit into Thursday, Friday and Saturday morning so as to leave time for preparation of the Halls of Residence for the commencement of the new term on the following Monday. Nevertheless a full programme of 19 papers, the Presidential Address and the 23rd A.G.M., was successfully completed. The first session, with Gerald Boalch as Chairman, included 6 papers on the ecology of marine and freshwater algae. Several papers in this session dealt with methods of measuring populations of macroscopic and microscopic algae. The second session, chaired by Bob Ross, opened with an interesting paper by Harry Powell on the French proposal to introduce Macrocystis to the Channel coast. The ecological implications in such a move were clearly explained, and backed up by data and photographs of Macrocystis in the neighbourhood of the Falkland Islands. The presidential address by Frank Round was a stimulating discourse on the many-sided problems at present under investigation in the realm of diatom taxonomy. To the non-specialists this address was both an eye-opener and a reminder to think more about this fascinating group of algae. The Presidential Address which, in published form, will be a valuable addition to algal literature.

The third session was devoted to papers on algal physiology and biochemistry. This was the largest session of the meeting, with 9 papers covering a wide range of topics. Four of these were particularly concerned with blue-green algae, whilst other papers dealt with the uptake of metals by micro-algae, zinc tolerances of freshwater green algae, interactions of algae and bacteria, and release of motile cells from non-motile phases of Haptophyceae. Dr Elizabeth Percival, with her usual expertise, kept discussions at a lively pace throughout the varied pattern of topics in this session. The last session on the Saturday morning contained papers on the morphology of red algae, and on cytology and ultrastructure. The chairman, Dr John Dodge, announced that Professor de Valera had been unable to come, and her paper on the red algal genus Chondria was read by the Hon. Secretary. The meeting ended with two papers on ultrastructure, one on the nucleus of Batophora pestedii and the other on the blue-green algae associated with Anthoceros, Blasia, and the fern Aspidia.

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The delay in production of this edition of the Newsletter is due to the poor response to requests for articles for publication. As stated in Newsletter Number 1, our aim is to facilitate communication between members of the Society through the dissemination of information which, it is hoped, will be of interest to all. The success of the Newsletter depends on your cooperation.

WINTER MEETING CONTS.

Again this year, when no specific topics were listed for the meeting, the balance of papers offered fitted rather well into the programme timing. I hope that this will always be so!

The social side of the programme was also well provided for - including some remarkable entertainments at a local hostelry which, to my knowledge - have never been announced at a Winter Meeting by a local Secretary! The Society Dinner was a most enjoyable occasion, and was preceded by a sherry party given by Goldsmith's College. The thanks of the Society to Dudley Richardson and to Goldsmith's College were expressed by Frank Round.

The 23rd Annual General Meeting was attended by 59 members. This meeting brought the membership good news and bad news. The good news included the steadily increasing membership, with 70 new members having joined in 1974. Whilst 28 of the new members came from the UK and 21 from the USA and Canada, the remainder were from Japan, Europe, New Zealand, S. America, Egypt and Kuwait. The VIIIth International Seaweed Symposium at Bangor in August 1974 was attended by 398 participants and their guests. Many overseas phycologists were at the Symposium, and the organisers at Bangor were congratulated on a first-class occasion. The Marine Flora Committee reported continuing progress, with the manuscript of the part of the Rhodophyta volume ready for submission and the publication date planned for late 1975. The Chlorophyta volume should be ready in manuscript form by the end of this year, and work is proceeding on the Phaeophyta volume. Further progress was to be reported with the seaweed mapping scheme, and a revised check-list of the British Marine Algae was in preparation. Whilst the Hon. Editor was able to report a continuing flow of good quality papers to the Journal, the financial position, and future prospects, were far from good. These were all the result of escalating costs - in paper, printing, production etc. These features were underlined by the Hon. Treasurer in presenting his report and the audited accounts for the year 1974. Increased Journal costs and big increases in expenses of Executive Members due to postal charges, cost of duplicating paper, and the travel expenses of Members of Council for the 2nd council meeting at Leeds (this last also a reflection of the cut-back in the finances of the Universities), had resulted in a deficit on the year's proceedings somewhat greater than predicted at the last A.G.M. This had reinforced the Council decision to move quickly on changes in the Constitution, and in Membership rates, also discussed at the A.G.M. (This important part of the A.G.M. is reported more fully as a separate item in this Newsletter - it being too important to be covered briefly in a general report on the Winter Meeting.)

A sad note in the A.G.M. was the announcement of the death of T.K. Rees early in December. Many of us had looked forward to seeing Ken Rees at Goldsmith's, the scene of his 'second career' as a stimulating teacher on his retirement from the Civil Service. A member of Council in 1968 and 1969, whose wise counsel and great personality were much appreciated by his fellow council members, he will be sadly missed.

The A.G.M. was also the time of retirements for some long-serving members. Harry Powell retired from Council as immediate Past-President. Harry's services to the Society over many years need no embellishment here, but his second period of work as an Executive Member was acknowledged, as were also the contributions of the retiring vice-Presidents. A special vote of thanks was also given to Arthur Marker who retired from Council after six years of first-class service in the important post of Hon. Treasurer. All of us involved in the running of this Society owe a great deal to his exemplary work in this time-consuming post. The new President, Professor W.D.P. Stewart, and the Vice-Presidents, Dr. E. Percival and Professor P.S. Dixon, were confirmed in office. The new incoming Hon. Treasurer is Howard Pearsen, and he, with the new Council Members, Drs K. Benson-Evans, R. Crawford and N. Reynolds, was welcomed.

It is now an accepted feature of this report that the venue and dates of the next winter meeting be announced. Accordingly, I can inform you that the next Winter Meeting (the 24th) will be held at Westfield College, University of London, on 2 and 3 January. Again we are facing difficulties of timing due to the January 1st Bank holiday, and the fact that the London University term commences on Wednesday 7 January 1976. This means that halls of residence would have to be vacated by the evening of Monday, 6 January, if we are to attempt a meeting later than the date proposed. I hope that members will give their full support to a shortened meeting. The 1977 Winter meeting will be a special occasion - the 25th. We hope very much that University term commencement will be more accommodating for us then!

A.D.F.

Alterations in Constitution (Clause 7) and Increases in Subscription.

members were notified in the agenda to the 25rd A G M that Council proposed changes in Clause 7 of the Constitution which governs payment of subscriptions. From 1976 subscriptions are due in advance and payable on 31 January. The reasoning behind this alteration is as follows. No alteration in the Constitution can be made "...except at the Annual General Meeting, or at a special meeting of the Society called by the Council for that purpose" (see Clause 22). In the normal course we would hope to deal with all alterations at the A.G.M. Subscriptions up till now have been payable in advance on 1 January. The A.G.M. is always held in the first week of January after this date. Hence without an Extraordinary General Meeting held in the course of the year, it would take twelve months for a changed subscription rate to become fully operative. Forewarning has always been the policy of the Council, and in any case to backdate a subscription increase would result in such administrative confusion that it would take fully twelve months to steady the situation! Council has become increasingly concerned in recent years that, with present rates of inflation and increases in costs, any likely advantages to be gained by the Society will be too rapidly lost in the twelve month lag period. Hence the proposal to alter the date of payment. In any future emergency situation Council can make recommendations to the members at an A.G.M. The members can then decide whether the proposed alterations are acceptable. If the voting is in favour of the alteration then it can become operative on 31 January of the same year. This alteration in date of subscription payment was fully discussed at the A.G.M., and was accepted by members as a prudent measure in the present uncertain financial situation.

Council then put to the members the need to increase subscriptions as from 31 January, 1976. The last increase in subscriptions was on 1 January, 1969, following an Extraordinary General Meeting held at Bristol in March 1968. The call for increased subscriptions thus follows a seven-year interval. In this time interval the number of Journals issued per year to members has gone up from one in 1968 to four in 1974, and there is little need for me to reiterate here the inflationary changes of recent years. The following subscription rates were proposed by Council, to operate from 31 January, 1976:-

| | |
|--|-----------|
| Ordinary members | £ 7.50 |
| Student members (Undergraduate and full-time research students who receive the Journal). | 5.00 |
| Associate members (Not in receipt of Journal) | 2.00 |
| Retired members | 2.00 |

Why increases on this scale are necessary.

The reasons are indicated in successive Income and Expenditure Accounts over the years, but I will summarize some salient points:-

| | | |
|------------------------------|------|----------|
| 1. <u>Officers expenses:</u> | 1971 | £57.30* |
| | 1972 | 129.02 |
| | 1973 | 133.12 |
| | 1974 | 244.94** |

* Business Manager (Journal) expenses are excluded for 1971 and 1972 since in the two years postal charges of £120.00 brought the Society an overall return of £1919.96. At that time all Library subscriptions, Reprints and Back Number Sales were dealt with by the Business Manager. Since 1972 Back Number sales only have been dealt with by the Business Manager; expenses of about £25.00 bring in about £170 - £200.00 per annum.

** Travel expenses of members attending the 2nd Council Meeting at Leeds were £104.39. This increase is mainly a reflection of the lack of funds in University Departments to cover attendance at this type of meeting. Rail fares have again increased since this meeting in September 1974, and basic accommodation charges are unlikely to remain static.

2. Newsletter.

| | | |
|--|------|--------|
| | 1971 | £69.92 |
| | 1972 | 63.54 |
| | 1973 | 72.35 |
| | 1974 | 125.47 |

Increases in paper and postage costs are largely responsible for the steep rise in 1974.

Subscriptions (contd.)3. Journal costs

The Journal is the one major expense - and major investment - of the Society. Over the years it has become a publication of international standing. For many overseas members it is the essential link with the Society. As stated by the Hon. Editor at each A.G.M. since 1972 members have been heavily subsidized by Academic Press since they started publishing the journal in 1972. At the outset, the cost of the Journal to the Society for each member was £2.00 p.a., so leaving £1.00 per member p.a. for other expenses of the Society. Over the years the costs of printing and production have increased, and have accelerated in 1974 to the extent that the cost of the Journal to the Society for each member in 1975 will be £3.90 p.a. This means drawing on our reserves far greater than could have been foreseen in 1973, when it was explained at the 22nd A.G.M. that Council could sanction a controlled deficit in the annual balance (at a time when our financial reserves were high), in order to support development of the Journal, and to delay for as long as possible any increases in subscription rates. No-one could then force the vast increases in costs of paper, labour, printing and overall production which have ensued. This is a situation which is far from static, and it is impossible to predict changes for 1976. It is no consolation to know that other societies with similar aims as our own are in similar situations regarding their Journal costs.

After considerable discussion the members of the 23rd A.G.M. accepted Council's proposal that the increases in subscription rates should apply from 31 January 1976. At the same time, Council were asked to look hard at all running expenses, and to effect economies wherever possible. The main Secretarial expenses in the year are postal charges associated with sending the First Circular and the Programme, A.G.M. Minutes etc. of the Winter Meeting to members. In 1974 the overall cost was £73.70. My estimates for 1975 put the postal charges for the same exercise at approximately £130.00. One way in which this expense could be cut down would be to send out the programme of the Winter Meeting with the Autumn number of the Newsletter. This will be a workable solution if members are prompt in sending both material for the Newsletter and abstracts of papers for the winter meeting. The Hon. Editor of the Newsletter and I are working on this method of distribution.

Council looks for the continuing support of all members in the difficult times ahead. In 1977 we will be celebrating the 25th anniversary of the founding of the Society. At the inaugural General Meeting held in Edinburgh on 12 July, 1952, the main object of the Society was clearly stated, viz. "...to encourage all aspects of the study of algae". It is our responsibility to ensure that this work continues.

A.D.B.

INTRODUCTION OF GIANT KELP PROPOSED FOR EUROPEAN WATERS.

Early in 1973 it came to the notice of British phycologists that French scientists from the Institut Scientifique et Technique des Pêches Maritimes were carrying out experiments which involved growing the giant kelp, Macrocystis pyrifera, in the sea at Roscoff on the north coast of Brittany, France. Further enquiries revealed that the Institut Scientifique et Technique des Pêches Maritimes had plans for introducing Macrocystis pyrifera to the coast of Brittany as a source of alginates. This proposal caused alarm to a number of phycologists as they considered that a wild population of this giant alga on the coast of Brittany would mean that it would very soon spread to the coast of the U.K.

In 1950 the Scottish Seaweed Research Association wanted to introduce the closely related species, Macrocystis integrifolia, to the Scottish coasts to increase the supply of seaweed for alginate production. On this occasion the British Advisory Committee on Scientific Policy set up a special committee which considered the S.S.R.A. proposal together with evidence from the seaweed industry, the Ministry of Agriculture, Fisheries and Food, the Admiralty and a number of marine biologists. The committee recommended, 'It might be practicable, but it would not be desirable to introduce foreign seaweed of industrial value into British inshore waters', and the proposed introduction was forbidden by Government order.

The giant kelp Macrocystis is easily the largest brown seaweed in the world growing up to about 65m (about 200 feet) in length. Three species are presently recognised in the genus - M. pyrifera, M. integrifolia and M. angustifolia - of which M. pyrifera is the largest and most widespread.

The genus mainly occurs in the southern parts of the southern hemisphere, growing best at subantarctic latitudes, but it is also found in the northern hemisphere. In various parts of the world it grows between sea surface temperature limits of 2° to 25°C and is thus a very adaptable species.

In the warmer water off southern California, Macrocystis grows mainly in offshore stands and a great deal of information about its ecology and biology there is known.

In cooler waters Macrocystis forms dense forests right up to low tide level and extends downwards to depths of at least 25m. Much of the frondage occurs at the surface well buoyed up by bladders.

Macrocystis has considerable economic value as a source of alginates. On the other hand it can present considerable problems to navigation.

All of the arguments put forward against the introduction in 1950 are still valid today. It is the case that the physical hydrographical and chemical conditions are suitable for the growth of Macrocystis from Portugal to at least half way up the Norwegian coast; and because it grows far larger and much faster than any native kelp species in the north Atlantic it could probably outcompete the existing Laminaria forest and thus profoundly modify the whole existing shallow-water ecosystem.

Due to its great length and tendency to form dense beds on offshore reefs it would constitute a new hazard to inshore navigation.

Offshore forests of this alga growing up from the sea bed to the surface and spreading along the surface would have considerable effects on local inshore water movements and thus change the dispersal patterns of sewage and other waste discharges.

Rocky areas at the moment dominated by brown seaweeds of the genus Laminaria are good fishing grounds, especially for shellfish (lobsters and crabs), and salmon are also netted close inshore. If these areas were taken over by Macrocystis the massive growths of this alga would make the present fishing methods difficult if not impossible.

The commercial harvesting of large beds of Macrocystis is much easier than the present system for harvesting Laminaria in Europe. However the Institut Scientifique et Technique des Pêches Maritimes have stated that at the moment in France only about half of the Laminaria which could be harvested is in fact utilised.

A number of cases are recorded where an introduced aquatic plant has spread freely and caused considerable problems of control. In the U.K. the Canadian Pondweed Elodea canadensis has caused considerable trouble and in Africa there have been problems with the Water Hyacinth Eichhornia crassipes; in both cases the plant has grown vigorously and obstructed waterways. Among the seaweeds the brown alga Colpomenia peregrina spread to Europe and caused problems on oyster beds. The green alga Codium fragile has spread along the east coast of U.S.A. and in parts of Europe has become very abundant to the detriment of the native species.

The spread of the brown seaweed Sargassum muticum on the west coast of North America, where it was accidentally introduced with Japanese oysters, is fairly well documented. In the last 30 years this alga has spread along about 1500 miles (2500km) of the west coast from Canada to southern California but there is some controversy as to whether it has had any detrimental effects. In the last two years this alga has also appeared on the south coast of England and in spite of a vigorous attempt to eradicate it, it is still holding its own and there is now some doubt whether complete eradication will be possible. If this weed spreads around the U.K. and southward to France it may be that owners of small boats and managers of marinas will be involved in considerable expense in order to reduce the growth in harbours where the weed is already causing problems by tangling around propellers and blocking cooling water intakes.

There is thus no known case where it has proved possible to eradicate an unwanted pest plant.

Because of their concern at the possible effects of Macrocystis pyrifera in European waters a number of European phycologists have opposed the proposed introduction. As a result of strong representations made through the International Council for the Exploration of the Seas (I.C.E.S.), backed up by resolutions of opposition from Phycological Societies and from the 8th International Seaweed Symposium (Bangor 1974), the Institut Scientifique et Technique des Pêches Maritimes have said they will not carry out further experiments in the sea for the time being.* We are now asking that European biologists give their support to the phycologists to ensure that Macrocystis is not introduced into European water.

Gerald Boalch & H.T. Powell.

* A modified plan, covering a much smaller area and with improved safeguards was also rejected by I.C.E.S., at their 62nd Statutory Meeting in October.

NATIONAL BIOLOGICAL SOCIETIES MEETING, DORKING, SURREY, February 1 1975.

The meeting was again chaired by Frank Perring, John Heath and Diana Scott of the Biological Records Centre (B.R.C.).

An initial period was devoted to matters arising from the previous meeting and involved discussion on: Red Data Books; the "Protection of Wildlife Bill" (which does not include algae!) recently given a second reading in Parliament; the continuing availability of money in the "Pet Wildlife Fund" * (see Newsletter no. 7; * applications should be made through, Mr J. Blackwood, Nature Conservancy Council, Cambridge Gate, Regents Park, London NW 1) and the recently published NERC "Coastal Code".

Lt. Col. N. Clayden (M.O.D.) presented a paper on "Nature conservation and recording on Ministry of Defence lands". Lt. Col. Clayden stated that one of his priorities was to establish liaison with biological organisations (N.C.C.; County Trusts; Natural History and national biological societies) in order to accumulate expert opinion on the biological value of sites owned by M.O.D. This involved at least 800 sites which vary in size from rifle ranges of a few acres to Salisbury Plain! Many of these have been assessed by the N.C.C. as being of national scientific importance and management action has been initiated for some 40 sites. Lt. Col. Clayden wishes eventually to collate all site data and establish a M.O.D. Biological Records Centre! He and his staff are at present preparing a guide to the historical monuments and ancient buildings on M.O.D. property. Another aim is to educate Forces personnel and Services authorities as to the value of conservation. Conservation management groups have been established and these comprise of both service and civilian representatives. Lt. Col. Clayden emphasised that biologists would not be denied access to (includes coastal) M.O.D property should they wish to undertake genuine biological research in such areas. Persons wishing to visit M.O.D. sites should contact him at:

DS 23 M.O.D. Telephone: 01-399-5281 ext 47132
Tolworth Towers
Surrey

He also requested expert opinion on habitats at Fingringhoe; Wainfleet; Thorney I. and Lulworth.

The afternoon session was opened with a report by Diana Scott on computing developments at B.R.C. New cards had been prepared for Ladybird and bird recording, and the Butterfly recording card had been redesigned. A Flea distribution atlas is at press, and mollusca and ant atlases are in preparation. Preliminary maps have been prepared for Dragonflies. A single species recording card on which a subdivided (into km²) 10km² would be printed, was proposed. The card would be completed by marking relevant km squares or tetrads as required. Members were reminded by Frank Perring of the existence of the new Irish grid reference system; he also recommended that the recent boundary changes following local government reorganisation be ignored and that the vice-county system be accepted for biological census areas.

John Heath reported on the progress of biological recording in Europe. B.R.C.'s exist in 13 countries but vary very much in sophistication. An international committee for the co-ordination of mapping projects has been formed and comprises of representatives from all European countries except Denmark, Spain, Bulgaria, Iceland, Portugal, East Germany and Albania. It was expected that all except the latter would be participating in the near future. The committee has been recognised by the IUCN and it is hoped that recognition would come also from other bodies including UNESCO. Pilot mapping of insects mollusca and nematodes on a European basis are well under way. The mapping of various plant and animal groups are progressing in Belgium, France, Ireland and the Netherlands.

The meeting ended with a discussion on the problems surrounding the production of scientific journals in the wake of increased printing and production costs.

Why beer may lose its head? Observer, December 22 1974.

"Wild rumors sweeping Britain: ... jellies would no longer gell... ice cream would be all runny... pills no longer dissolve in water... even British beer would lose its head... remarkable range of uses that it makes wonder that the nation survived before they were discovered..."

[An enormous demand and stable productivity in the field has caused a shortage of alginates !].

ECOLOGICAL WORK AT THE DEPARTMENT OF BIOLOGICAL SCIENCES
UNIVERSIDADE FEDERAL DE SÃO CARLOS, BRAZIL.

The Department of Biological Sciences is concerned mainly with aquatic and terrestrial tropical ecology. The principal subject of study is a shallow reservoir located within typical savanna vegetation with nutrient poor soil and low agricultural activity. Nutrient input is due to underground water which seeps through the soil and injects low amounts of phosphate and nitrate. Several lines of research have been undertaken during the four years of the project, and include primary production levels of phytoplankton and macrophytes, the phyto-zooplankton taxonomy and its interactions with basic environmental factors (hydrology and climatology).

One of the main conclusions of this study is that the phytoplankton community is at so low a state of nutrition that response to enrichment experiments is very slow. If this is a true model for certain conditions in tropical environments, then the effect of pollution could be delayed in certain tropical homogenous and stable aquatic environments.

The next lines of research to be pursued include, soil microbiology and the savanna vegetation and possible interactions with the aquatic community. Algal cultures of the dominant phytoplankton will be established to provide material for further physiological work. The project is being supported by a number of Brazilian financial agencies and also has the cooperation of the Tokyo Metropolitan University through the technical assistance of Prof. N. Nakamoto.

J. Tundisi
 Professor Titular
 Chefe do Departamento de
 Ciências Biológicas.

VIII INTERNATIONAL SEAWEED SYMPOSIUM, UNIVERSITY COLLEGE OF NORTH WALES,
BANGOR, AUGUST 17 - 24 1974.

Informal proceedings began during the first Saturday when a number of participants met and travelled together on the train from London - which with good cause could have been called the "Phycologists Special". In the evening we were welcomed and entertained at a reception given by the University College. Later still, the University Theatre Group presented an open-air performance of "Twelfth Night" in the college inner garden.

Sunday was taken up with field work in Anglesey at Rhosneigr and Treaddur Bay. The opening plenary lecture of the Symposium was read by Prof. Fogg in the evening. Activities began in earnest on Monday with simultaneous sessions covering pure and applied phycological research. (Papers to be published in the "Proceedings of the Symposium".) After further opportunity for field work on Tuesday afternoon, films on phycological topics were shown during the evening. An outstanding film produced by the Biologische Anstalt, Helgoland and the Institut für den Wissenschaftlichen Film, Göttingen, ["Development of Laminaria"] used time-lapse photography to show the complete life-history (including fertilisation) of Laminaria. Prof. Chihara presented a film on the mass mari-culture of Nori in Japan and this was followed by a film on the introduction of Sargassum muticum to Britain. Evening receptions were given by Maxicrop Ltd and Alginate Industries Ltd; and the Symposium dinner was held on Thursday evening when we dine on Cawl Cennin; Brithyll Myglyd a Leman; Golwyth Eidion (Leek Soup; smoked trout and lemon; grilled sirloin steak....).

The meeting was concluded on Friday afternoon with a discussion on the attempted introduction and culture of Macrocystis in the north eastern Atlantic. Resolutions were passed which indicated the Symposium's concern and disapproval. The last evening was spent welsh-style when we were entertained to a Noson Lawen. The Symposium's success is due to the Prof. Fogg, Dr. W.B. Jones and the organising committee all of whom put superhuman effort into organising the meeting.

Post-symposium excursions were organised to Scotland, western England and for the dedicated - field work on the Isle of Man.

Despite fog and a delay at Liverpool airport, the party arrived safely on the Island and were welcomed to Port Erin and Liverpool University Marine Laboratory by Prof. Naylor. Collecting trips were made to St Mary Ledges, Scarlett Point and Derby Haven. Opportunity was taken for sightseeing at Creggish, Castletown and Peel. Several participants undertook dives on the west coast of Man.

Our thanks to George Russell and Jo Kain for organising the trip so well.

A Survey of Taxonomic Characters in the British Phaeophyta.

A numerical taxonomic investigation of all British species and subspecies of Phaeophyta was undertaken by G. Russell (Liverpool University) and R.I. Fletcher (Portsmouth Polytechnic) during 1974 and has now been completed. As an essential preliminary step in this project 132 characters of taxonomic importance were selected and their incidence recorded for each of the 197 taxa involved. These characters are based on morphological, reproductive, life-history and ecological features and have been recorded as sequences of numbers punched on standard Fortran computer cards. Each deck of cards therefore represents an inventory of the British Phaeophyta and their main diagnostic features, in extremely concise form.

Copies of these decks of cards, together with an explanatory pamphlet, have now been prepared and are available for distribution. Any algologist who wishes to receive a copy of this survey may obtain one from Dr. G. Russell, Hartley Botanical Laboratories, The University, Liverpool L69 3EX.

In the first instance these will be sent free of charge but if there is a heavy demand then it may become necessary to impose a charge to cover production costs.

It is hoped that additions, amendments or comments which recipients may wish to make will be communicated to the authors. Such contributions will be of enormous help in the production of the flora.

G. Russell.

Marine Wildlife Conservation in Dorset.

Dorset Naturalists' Trust Conservation Studies, 1, pp. [1] + 32.

The Countryside Commission in their Special Study Report (1969), Nature Conservation at the Coast, indicated that there is a need for scientific evaluation of local coastal wildlife which would be available to authorities with a responsibility for coastal planning and development. The Dorsetshire Naturalists' Trust through their Marine Subcommittee have undertaken this most necessary task and have produced an informative document in a relatively short period of time.

The Dorset coastal environment is outlined in terms of its natural, scientific, educational and commercial resources. On the basis of this information recommendations have been made for future policy on the management of the Dorset coastal environment. The report is terminated by a number of appendices which inter alia assess the nature conservation value and public use of marine sites by means of awarding each site points according to predetermined criteria.

In this age of change which increasingly appears to be affecting the coastline of the British Isles (land reclamation in Lincolnshire; coastal stabilisation in Norfolk, Suffolk, Essex, Sussex and Kent - see Newsletter no.5 "Coastal conservation on the Isle of Thanet") and lowland northern Europe (cf. Den Hartog, 1959, for the Netherlands) conservation groups and biological societies must follow the lead taken by the Dorsetshire Naturalists' Trust and produce accounts for other areas.

Gayral, P., 1975. LES ALGUES, Morphologie, Cytologie, Reproduction, Ecologie.
Paris: Doin. ISBN 2-7040-0051-4.
pp. 166 + 84 figs. (19 in colour).
Price Ff. 120.00. (£12.00 approx)

A particularly well illustrated text-book which will undoubtedly be widely used by students as an introduction to the algae. A wide range of topics is dealt with although not in great detail, sufficiently enough to enable the reader to glean major points concerning classification, life histories and ecology. Rather expensively priced by British standards.

DAWES, C.J., 1974. Marine algae of the west coast of Florida.
pp. xvi + [1] + 227, Coral Gables : Univ. Miami Press, ISBN 0-87024 -258 -X.

To the phycologist active in colder temperate areas and therefore a little out of touch with activities in tropical and subtropical America, it is surprising to find a new flora for part of the area detailed so thoroughly by Prof. Taylor not 15 years ago. Despite this, there is a fundamental difference in concept behind the two works. "The marine algae of the west coast of Florida" does not attempt to emulate Prof. Taylor's work but complements it and provides phycologists in the area (both amateur and professional) with a valuable handbook the use of which will not be restricted by size or cost.

Chapters 1, 2 & 8 outline the physical nature of marine habitats (in Florida); the characteristics of marine algae; and the marine plant communities of the west coast of Florida. The chapters provide in brief form information for those not well acquainted with the algae, the west coast of Florida, or both.

Chapter 3, is not only a key to the algae of West Florida, but to the book as a whole. Too few algal publications provide concise keys to species. It is pleasing to note, that where possible vegetative characters are used.

Chapters 4, 5, 6 & 7 contain species descriptions to Cyanophyta, Chlorophyta and Xanthophyta, Phaeophyta and Rhodophyta respectively. Each species entry comprises of a cross-reference to a Taylor publication; three or four sentences of description, and a comment as to ecology or distribution in the area. Red, brown and green algae are illustrated by line drawings; the Cyanophyta by photographs. Unfortunately only one third of the species entries are illustrated and the reader is referred to Taylor (1960) for additional illustrative data. The author follows the blue-green algal taxonomy as put forward by Drouet, with synonyms and cross references to other major works on the Cyanophyta. The text is appended by a glossary, bibliography and index.

Brevity is a major point in the production of this work. The limitations this imposes, particularly in the species descriptions, initially appear to be disadvantageous. However, with difficult species or groups the reader is referred to other works. Despite these limitations, this book will undoubtedly be of help to amateurs, students, and phycologists active in Western Florida and adjacent areas. Its size and portability ensures its use as a field-companion.

"Marine algae of the west coast of Florida" is reasonable priced at \$ 15 (apprx. £6.50) in this age of spiralling paper and publishing costs. British phycologists still making do with a hand-book/flora published nearly 45 years ago should be most envious of colleagues in Florida who now have not only a detailed flora, but a most up to date hand-book.

First International Symposium on research into the Desmidiaceae.
(See Newsletter no. 3.)

The delayed publication of the Proceedings of the Symposium will be available during early 1975. The contributions are in English, French or German with summaries in all three languages. A translation of the table of contents is as follows: MOLLENHAUER: First International Desmid Symposium, Bieber/Spessart, September 1971. Introduction, Survey, and some considerations of the present status of research. ANDRESEN: A note on the nomenclature of Desmids. BICUDO: Typification of the Generic name Arthrodesmus (Desmidiaceae). BIEBEL: Morphology and life cycles of Saccoderm desmids in culture. CHLARDON: Action of light and darkness on the plastid structure in Cosmarium lundelli and in Glosterium acerosum (Desmidiaceae). DOBERSTEIN: Some investigations concerning the formation of the secondary walls in Micrasterias denticulata De Prebisson (Desmidiaceae). DUBOIS-TYLSKI: Ultrastructural aspects of the induction of sexuality in Glosterium moniliferum (Bory) Ehrbg. (Desmidiaceae). GERRATH: Notes on Desmid Ultrastructure. I. Cell wall and zygote wall of Cylindrocystis hrebissonii Meneghini. II. The replicate division septum of Bambusina hrebissonii Kütz. KASPRIK: Karyological contributions in the Desmid genus Micrasterias. KIES: Electron Microscope studies on the conjugation in Micrasterias papillifera (Desmidiaceae). LENZENWEGGER: Conjugation and germination of zygotes in Micrasterias rotata (Grev.) Ralfs (Desmidiaceae). LHOTSKY: The production of Chlamydozoospores in the genus Glosterium (Desmidiaceae) in nature. LIPPERT: Some aspects affecting conjugation in Glosterium (Desmidiaceae). MIX: The ultrastructure of the Desmid cell wall and its taxonomic relevance. MOLLENHAUER: Considerations of descent, evolution and phylogenesis of the Zygnematales (Chlorophyta). Ideas based on a consideration of the analysis of longitudinal symmetry of vegetative cells.

Desmid Symposium Proceedings contd.

RUZICKA: On some rather trivial problems in Desmid research and for Desmidologists. SCHULLE: Investigations on synchronous cell growth in Staurastrum pingue (Teiling (Desmidiaceae) in response to alternating light and darkness. TASSIGNY: Observations on the qualitative variations of Desmid populations in some mesotrophic and dystrophic ponds.

The proceedings will form volume 42 of the series Beihefte zur Nova Hedwigia. Price 200DM. Copies may be ordered from F. Flück-Wirth (Krypto), New and Secondhand books in Cryptogamic Botany, CH-9053 Teufen, Switzerland.

Dieter Mollenhauer.

BRITISH PHYCOLOGICAL SOCIETY SUMMER FIELD MEETING, ABERDEEN, SUMMER 1975.

A field meeting will be held on the east coast of Scotland from 26th July until 2nd August 1975. The meeting will be concerned with marine algae and will take the usual form of a number of visits to contrasting shores followed by laboratory examination and discussion of material collected. The meeting will provide opportunity for young algologists to learn identification from more experienced persons. It will also enable compilation of a list of algae for an area for which previous records are extremely poor and which may shortly be subject to the influence of the offshore oil industry.

It is hoped to provide laboratory facilities in the University of Aberdeen and to provide accommodation in one of the University's Halls of residence. The meeting is open to all, British or overseas, experienced or not, fresh-water or marine. If you are interested in receiving further information please write to the Field Meeting's Secretary at the address below.

Dr M. Wilkinson
Dept. of Brewing and Biological Sciences,
Heriott-Watt University
Chambers Street,
Edinburgh, EH1 1HX
Scotland.

OTHER FIELD TRIPS.

Members of the B.P.S. are welcome to attend the following meetings:

July 6, Sandwich Bay, Kent: Conchological Society/Kent Field Club.
September 26 - 28, Gower, South Wales, Conchological Society.
For further details contact: Mr T. Pain, 47 Reynolds House, Millbank,
London, SW1 4HP.

September 13, Whitstable, Kent: Kent Field Club.
11.00 AM. Meet at the "Old Sportsman Inn" [TR 063647] near Seasalter.
Meeting to visit Saltmarsh, Zostera Beds and London (eccene) clay
algal communities. Leader I. Tittley.

FIELD STUDIES COUNCIL COURSES FOR ADULTS

The F.S.C. is offering a number of courses of interest to amateur and student phycologists. These include - marine biology for SCUBA divers - sublittoral marine ecology - freshwater biology - Suffolk estuaries - the sea coast - exploring rocky shores - seaweeds.

Further details are available from: Field Studies Council
Information Office
Preston Montford
Shrewsbury SY 14 1HW.

NEW MEMBERS, MARCH 1975.

- ASHRAF, M. Queen Mary Students House, 7 Stainsbury Road, London, E.14.
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 YOUNG, D.N. Dept. of Botany, Univ. California, Berkeley, Calif. 94720, U.S.A.
 ZOTO, Dr G. Dept. of Biology, University of Wisconsin La Crosse, La Crosse,

CHANGES OF ADDRESSES MARCH 1975.

- ARMITAGE, Dr B.J. Browns Ferry Biothermal Facility, Box 2000, Decatur, Alabama 35601, U.S.A.
- AREGOOD, Miss F.C. 158 Glenside Drive, Jackson, Mississippi 39211, U.S.A.
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- CHIU-KING, Mrs B.T. 28 Barely Heights, South Perth, Western Australia, 6151.
- CONWAY, Dr.E. 1 Rothsay Rd., Curzon Park, Chester, CH4 8LJ.
- DEN HARTOG, Prof. C. Dept of Aquatische Oecologie, Katholiek Universiteit, Nijmegen, Netherlands.
- DIZERBO, Dr A.H. 80, Rue Jean Jaures, Brest- 29200, France.
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- WYATT, Dr J.T. Aquatic Ecologist, Water Quality Engineering Division, US Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD 21010, U.S.A.

We appear to have lost trace of the following members whose mail is returned from the addresses indicated. Any information please?

- JOYCE, A.E. Moine, Back Road, Colspie, Sutherland, Scotland.
- LAWSON, R.P. 150 Stnneyfields Court, Sandy Lane, Newcastle -u- Lyme, Staffs.
- MCELLISTER, H. Botany Dept., The University, Glasgow W.2., Scotland.

W.D. Richardson
Hon. Membership Secretary