

Phycological Society of Southern Africa



**Newsletter
No. 60
December 2005**



Past President

Grant C. Pitcher (gpitcher@deat.gov.za)
 Marine and Coastal Management
 Private Bag X2
 Rogge Bay
 8012

President

John J. Bolton (bolton@botzoo.uct.ac.za)
 Department of Botany
 University of Cape Town
 Private Bag
 Rondebosch
 7700

Secretary-Treasurer

Wendy Stirk (Burnett) (stirk@kzn.ac.za)
 Research Centre for Plant Growth and Development
 University of KwaZulu-Natal Pietermaritzburg
 Private Bag X01
 Scottsville
 3209

Membership Secretary

Claudio Marangoni
 (claudio@biology.biol.wits.ac.za)
 School of Animal, Plant & Environmental Sciences
 University of the Witwatersrand
 Private Bag 3, P.O. Wits
 Johannesburg
 2050

Newsletter Editor

Gavin W. Maneveldt (gmaneveldt@uwc.ac.za)
 Dept. of Biodiversity and Conservation Biology
 University of the Western Cape
 Private Bag X17
 Bellville
 7535

Table of Contents

	Page No.
From the Editor	2
Reports presented at the General Meeting of the PSSA held at the IPC8, Durban ICC, Durban, South Africa, 14 August 2005	2-9
1. President’s Report	2-5
2. Secretary-Treasurer’s Report	5-6, 7
3. Membership Secretary’s Report	6
4. Newsletter Editor’s Report	6
5. Minutes of General Meeting	8-9
News and Reviews	
1. The new PSSA Poster	10
2. 8 th International Phycology Congress	10-11
3. SAAB 2006	12
4. Guide to the Seaweeds of KwaZulu-Natal	12-13
Featured Article:	
<i>Seaweed and monsoon rains: The SeaweedAfrica workshop in Zanzibar</i>	13-15
Conference Countdown	15
Calendar of Events	16





From the Editor

The year has come and gone so very quickly and before long it will be time to start planning for our next meeting that will be held in Mozambique (see conference countdown). It certainly was good to see so many of you at the recently held 8th International Phycological Congress held in Durban, during August this year. Special thanks should go to Stuart and Richard (local co-chairpersons of the organising committee) for organising such a wonderful event in which the PSSA and the Phycological Society of America jointly co-hosted the congress; Stuart was kind enough to provide a summary of the IPC8 proceedings. IPC8 was also the venue of our GM. In this issue, you will find the minutes of the GM and reports presented by the committee members.

A number of exciting things have happened since we've last interacted. The society has produced a new poster and I have included a copy for each of you. SAAB 2006 is just around the corner; if at all possible, please make an effort to attend this event as the organisers are planning an algal session. The *Guide to the Seaweeds of KwaZulu-Natal* is now also available. The SeaweedAfrica project that officially ended in October this year forms the basis of our featured article. While we haven't provided a review of the project, Robert Anderson has given an account of the Zanzibar (Tanzania) meeting of the project.

Thanks to all those who have contributed to this edition of the newsletter. Please remember to send any and all information you think may be of interest to the society on to your regional collators (details below). Here's wishing you all a blessed and safe festive season.

Northern Areas

Stuart Sym

stuart@biology.biol.wits.ac.za

Southern Areas

Enrico Tronchin

tronchin@botzoo.uct.ac.za

Sincerely
Gavin

Synarthrophyton patena
epiphytic on *Gelidium capense*



Reports presented at the General Meeting of the PSSA held at the IPC8, Durban ICC, Durban, South Africa, 14 August 2005

1. President's Report – Grant Pitcher

Thanks to those who have contributed to this report: Anderson, R [MCM], Bolton, J [UCT], Janse van Vuuren, S [NWU], Maneveldt, G [UWC], Marangoni, C [WITS], Pitcher, G [MCM], Stirk, W [UKZN]

University of KwaZulu-Natal

Department: **Research Centre for Plant Growth and Development**

Research Focus: Algal Physiology [role of plant growth regulators in microalgae and seaweeds, secondary metabolites in microalgae and macroalgae, and seaweed concentrates].

Research Programmes/Projects:

- South African – Hungary [Prof. Vince Ordog] and Czech Republic [Prof. Mirek Strnad] collaboration on plant growth regulators with a focus on agricultural applications.
- Links with Industry – Test material from Kelpak [monthly samples to ensure "quality control" for export], Taurus and for Algea in Norway.

University Cape Town

Department: **Botany Department**

Research Focus: Seaweeds [Biodiversity and Aquaculture]

Research Programmes/Projects:

- **Biodiversity and biogeography of seaweeds** [NRF project funded for 2005-8 in collaboration with Rob Anderson (MCM) and Gavin Maneveldt (UWC)]
- **Integrated aquaculture of seaweeds with abalone** [NRF project funded for 2005-8 in collaboration with Max Troell and Christina Halling (University of Stockholm, Sweden), Gavin Maneveldt (UWC) and Rob Anderson (MCM)]

Staff and Student achievements/activities:

AJ Smit taken up a post as Lecturer at UKZN (formerly Durban-Westville); Neil Griffin to begin Post Doc at Rhodes University; Fergus Molloy now employed as Research Manager for



Great Barrier Reef Marine Park in Townsville, Australia.

Publications: 'Guide to the seaweeds of KwaZulu-Natal' with Belgian colleagues incorporating detailed scientific descriptions of ca. 250 species, with colour photos; major publication on biogeography of KZN seaweeds (Bolton et al. 2005); paper in press on seaweed communities of Sodwana (Anderson et al. Afr J Mar Sci); 3 papers published from Revel Iyers PhD on *Gracilaria*; Co-author of chapter in major book on marine macroecology; 3 papers in press in Proceedings of 18th International Seaweed Symposium (Bergen, Norway) – first authors Wakibia, Maneveldt, Robertson-Andersson; 2 new species with Dutch and Belgian colleagues.

Students: MSc Adrian Evans on subtidal seaweed communities of KZN submitted; MSc of Asanda Njobeni on growing *Gracilaria* on abalone farms submitted; Enrico Tronchin obtained prestigious 'Claude Leon Harris' Postdoctoral Fellowship to continue work on molecular taxonomy of Gelidiaceae; PhD of Joseph Wakibia (UWC 2005) on cultivation of *Eucheuma* and *Kappaphycus* in Kenya co-supervised by John Bolton, Derek Keats and Lincoln Raitt; Graduation of Deborah Robertson-Anderson with MSc on growing *Ulva* on abalone farms; Graduation of Michelle Potgieter with coursework MSc in Applied Marine Science, with project on sediment production by abalone on different feeds.

Marine & Coastal Management

Department: Inshore Resources - Seaweed Unit

Research Focus: Scientific advice for management of SA seaweed resources [Kelp; Seaweed Biodiversity; Seaweed Cultivation]

Research Programmes/Projects:

- Kelp Resources [impacts of harvesting methods mainly for abalone feed; continued to monitor exploitation]
- Seaweed Diversity [Documenting and understanding SA seaweed diversity: partnerships over the last 6 years with UCT, Gent University (Flanders), Netherlands (H. Stegenga, Leiden), and the SeaweedAfrica Project (various African and European partners).

- Seaweed Mariculture [NRF – Swedish Project on integrated aquaculture of seaweeds on abalone farms; several farms e.g. I&J now cultivating seaweeds on a large scale]

Staff and Student achievements/activities:

- Two papers accepted (Anderson et al, Rothman et al) for Proceedings of 18th International Seaweed Symposium
- Anderson co-author of 3 papers published in 2004
- Field Guide to the Seaweeds of Kwazulu-Natal (O DeClerck, JJ Bolton, RJ Anderson and E. Coppejans), with taxonomic sections by various authors, to appear in Aug 2005 - termination of 6 years of SA/Flanders co-operation

Department: Physical, Chemical & Biological Oceanography; Mariculture

Research Focus: Phytoplankton Physiology & Ecology; Harmful Algal Blooms

Research Programmes/Projects:

- SCOR-IOC GEOHAB Programme – HABs in upwelling Systems
- Benguela Current Large Marine Ecosystem Programme [BCLME] – HAB Component [5 projects]
- International Atomic Energy Agency – HAB Regional Project on Toxin Analysis
- ENVISAT MERIS Project
- Molluscan Shellfish Monitoring and Control Programme

Students:

- Carlos Sebastian-Ruiz [PhD]
- Stewart Bernard [PhD]

University Western Cape

Department: Biodiversity and Conservation Biology

Research Focus: Systematics and ecology of encrusting coralline red algae; Marine algal biodiversity; Abalone aquaculture and the use of fresh seaweed formulations; Herbivore-algal interactions on rocky shores

Research Collaboration: Univ. of Cape Town, Jacobsbaai Sea Products, Univ. of Stockholm, Sweden, Univ. of Santiago, Chile, Univ. of Portsmouth, UK, Univ. of La Trobe, Australia

Students: 1 Honours student graduated, 1 Honours student to complete November 2005, 2 MSc



students to submit in October 2005, 1 PhD student to graduate in September 2005, 1 X PhD student thesis submitted, awaiting external reviews

Staff and Student achievements/activities:

2 book chapters published in 2004/5, 4 scientific papers in press, 2 popular articles, 10 conference presentations

University Witwatersrand

Department: School of Animal, Plant and Environmental Sciences

Research Focus: Taxonomy, micromorphology and cell biology of

microalgae [particularly those species considered harmful]

Staff and Student achievements/activities:

Richard Pienaar returned to department as an Honorary Professor.

Stuart Sym has been appointed Assistant Dean of the Faculty of Science Undergraduate Affairs.

Claudio Marangoni co-ordinated the SANTED - NEW Inhaca field trip 2004/5 and re-establishing links between Wits and the Inhaca Research Station.

Collaborated with David Hernandez-Becerril (sabbatical) and Violeta Velikova (post doc).

Students: Honours Graduate: R Mason – A Gymnodinioid species from Lambert's Bay. Winner of the Florence D Hancock Award for a phycological project

MSc Graduate: S Dukhan – An ultrastructural study of *Lepidodinium viride* Watanbe et al. from False Bay

University Port Elizabeth

Department: Botany Department

Research Focus: Surf Zone Diatoms; Solar Salt Works; Microalgal Dynamics in Estuaries; Seaweeds

North-West University – Potchefstroom Campus

Department: Botany – School of Environmental Sciences and Development

Research Focus: Taxonomy, ecology, physiology and biochemistry of algae from the Vaal River

Research Programmes/Projects:

- Development of a database of planktonic and benthic species of the Vaal river for the purpose of water quality characterization

- Autecological studies on species isolated from the Vaal in order to understand the development of blooms
- Description of successional and seasonal patterns, including the correlation of population abundances with various physical and chemical variables
- Use of diatom assemblages as biomonitoring tools
- Investigation of exotic species in Vaal river [not previously found in African inland waters]
- Investigation of processes to improve removal of the algae during specific phases of water treatment

Staff and Student achievements/activities:

Published in African Journal of Aquatic Science [x3] Hydrobiologia [x2] Water SA [x4]

Students:

2 MSc students [Carrim A and Kriel GP] 3 PhD students [du Plessis K, Taylor JC van Ginkel C] Post Doc [Levanets A]

Conference & Workshop Participation

National Conferences

- 20th Congress of the Phycological Society of Southern Africa, Magaliesburg, Gauteng [UWC, UCT, UPE, MCM, UKZN]
- IV Southern Connections Conference, University of Cape Town, Cape Town [UWC]
- 12th Southern African Marine Science Symposium, Durban [UWC, UCT, MCM, UPE]

International Conferences

- XI International Conference on Harmful Algal Blooms, Cape Town, South Africa [MCM, WITS, UPE, NWU]
- International Marine Biotechnology Conference in St John's, Canada [UKZN]
- XVIII International Seaweed Symposium, Bergen, Norway [UWC, MCM, UCT]
- Conference on Biodiversity, Science & Governance, UNESCO Headquarters, Paris, France [UWC]
- GEOHAB Open Science Meeting: Harmful Algal Blooms in Fjords and Coastal Embayments, Vina del Mar, Chile [MCM]



- GEOHAB Open Science Meeting: Harmful Algal Blooms and Eutrophication, Baltimore, USA [MCM]
- American Society for Limnology and Oceanography, Santiago de Compostela, Spain [MCM]
- Third Symposium for European Freshwater Sciences at the University of Edinburgh, United Kingdom [NWU]
- 18th International Diatom Symposium, Międzyzdroje, Poland [NWU]

Workshops

- Southern working group of the Aquaculture Association of Southern Africa, Stellenbosch [UWC].
- KZN Seaweed Guide Workshop, Gent, Belgium [MCM]
- SeaweedAfrica Workshop, Porto, Portugal [MCM]
- IOC-Danida Advanced Training Course on the Taxonomy and Biology of Harmful Marine Microalgae, Copenhagen, Denmark [WITS]
- International Workshop on forecasting and data assimilation in the Benguela and comparable systems, Cape Town, South Africa [MCM]

Editorial & Committee Membership

- South African Journal of Botany [Sym S – Editorial Board]
- African Journal of Marine Science [Pitcher G – Editor; Bolton J – Editorial Advisory Board]
- Botanica Marina [Bolton J – Editorial Board]
- Harmful Algae [Pitcher G – Editorial Board]
- Phycologia [Sym S – Associate Editor]
- Special Issue of Oceanography [Pitcher G – Guest Editor]
- Proceedings 18th International Seaweed Symposium [Anderson R – Senior Guest Editor]
- Proceedings of the XI International Conference on Harmful Algae in African Journal of Marine Science [Pitcher G – Co-Editor]

Committee Membership

- International Seaweed Association [Anderson R – Executive Committee Member]
- International Phycological Society [Sym S – Council Member]

- SCOR-IOC GEOHAB Programme [Pitcher G – Chairman]
- SCOR National Committee [Maneveldt G – Member]

2. Secretary/Treasurer's Report – Wendy Stirk

The Society had an opening balance of R19 344.86. The main expenses incurred in the running of the Society since the last General Meeting held in January 2004 were a small deficit from the Magaliesburg Congress, prize monies from the conference and the costs in publishing the three newsletters during 2004. The costs of the newsletters for 2005 are not included in this balance sheet. SASCA paid their award contribution as well as the money from the 2003 PSSA congress organized by the former University of Port Elizabeth. Subscription payments were right down from previous years despite the fact that this balance sheet should reflect two years worth of subs. Claudio has just recently sent out subscription renewals for the last two years and so the money should start rolling in. We paid the HAB organizers R15 000 in 2003 - R5 000 donation and R10 000 loan which they have paid back as reflected in this balance sheet. The other big expenditure was the R25 000 donation to IPC8. The amount if any, to be paid back depends on the profits from the conference. Other items include the interest and bank service fees. This gives PSSA was closing balance of R16 601.41 with a capital loss of R2 743.45.

The PSSA monies are consolidated into a single Money Market Account held at First National Bank. These have minimum charges - a basic monthly charge and a cash handling fee and the higher interest rate than a current account. There is also a cheque book linked to this account that makes it convenient for the running of the accounts. There was a slight problem with the account this year. For three months there were no transactions so the account was frozen and we were not sent monthly bank statements. I reactivated the account by depositing my subs. With the subs now being collected, this should keep the account active.



I provided the details required by First National Bank for FICA so we are still legal.

Being a Society account, we have to have two signatories – at present, myself and Grant but each withdrawal or cheque requires just one signature. I would suggest that Grant who is now Past-President remains as a signatory until a new committee is elected at the next General Meeting in January 2007.

3. Membership Secretary's Report – Claudio Marangoni

At the end of 2003 we had 52 members. To date we have 46 paid up members:

- (16) Life members
- (13) Ordinary members
- (2) Ordinary members (overseas)
- (2) Retired members
- (12) Student members
- (1) Corporate member

There has been a nice response from our neighbouring countries with 6 new members. If you have not yet paid your membership fees, please do so as soon as possible. I will be sending out reminders for renewal in January 2006.

I wish to apologise to the Society for not having performed well since my appointment as Membership Secretary, and assure you that henceforth, I will make every effort to fulfill the requirements of this portfolio. I would also like your assistance with encouraging as many people to join as possible, as the Society is only as strong as its membership.

4. Newsletter Editor's Report – Gavin W. Maneveldt

With the support of many of you, we have consistently been able to produce three newsletters over the past three years. While the timing of the newsletters have not always been precise, I have tried to produce an issue for March, June/July and December of the same year. Although we have had

a substantial increase in the number of general submissions by ordinary members pertaining to “news and reviews”, we have had very little support from our student members. Over the past year and a half, I have received only two student submissions compared with six for the previous year.

The last issue for 2003, that was also our 21st anniversary edition, was the first of the new format editions. I have had quite a number of positive feedbacks about the new format particularly with regard to the quality of both the content and the printing. Please remember that continued suggestions pertaining to improvements are always welcome as this can and will only improve the quality of future editions.

I take this opportunity of reminding you that the newsletter and all the articles therein are all available for download from the society's website. This is especially useful since all images are visible in their original colour. At the last GM I reported that the website was receiving very little attention. I am now happy to report that since mid April 2002 and as of 16H00, 12 August 2005, the total number of hits for the site stood at 20988, suggesting that we are attracting quite a number of visitors to our site. I would also like to draw your attention to missing and/or inaccurate membership details on the website. Many of you have no doubt left to work elsewhere, broadened your research interests, changed your portfolios, had your institution's name changed, and so on. Once again, thank you to all who have contributed to the success of the society's newsletter for the past year and a half.





PSSA BALANCE SHEET
4th December 2003 – 4th July 2005

Money Market Account (First National Bank)

	Credit	Debit	Balance
Brought forward December 2003			R19 344.86
PSSA 2004 Congress (Magaliesburg)		R1 230.00	R18 114.86
2004 Congress Awards		R1 200.00	R16 914.86
2003 Newsletter Article Award		R400.00	R16 514.86
Newsletter (No. 55, 56, 57)		R1 664.95	R14 849.91
SASCA Award Refund	R400.00		R15 249.91
PSSA Congress Profits (2003 UPE?)	R13 996.69		R29 246.60
Subscriptions (2004 and 2005)	R 800.00		R30 046.60
HAB Refund	R10 000.00		R40 046.60
IPC8 Donation		R25 000.00	R15 046.60
Interest	R2147.40		R17 194.00
Service fees		R592.59	R16 601.41
TOTAL ASSETS (04/07/2005)			R16 601.41

Capital loss for the period 4th December 2003 to 4th July 2005 R2 743.45

Outstanding:

- 1) Subscriptions for 2004 and 2005
- 2) Newsletter costs for 2005 issues
- 3) Postage of subscription letters

W. Stirk

(Secretary/Treasurer)

G. Pitcher

(Auditor)



**PSSA GENERAL MEETING
ICC (Durban) – 14th August 2005**

Minutes

The PSSA President Grant Pitcher called the meeting to order at 1.50 pm and welcomed everyone who could attend.

Action

1. Attendance

Present: M. Rothman, C. Marangoni, P. Wing, B. Hubbart, D. du Preez, E. Campbell, R. Anderson, G. Maneveldt, E. Tronchin, J. Bolton, H. Stegenga, R. Pienaar, S. Sym, G. Pitcher, W. Stirk.

Apologies: J. Adams, G. Bate.

2. Matters Arising

i) National Biodiversity Institute: Grant proposed that this item be taken off the agenda. This was agreed as the current SANBI committee is currently in flux. John Bolton has been contacted by Wendy Fodden about algae as endangered plants so SANBI is aware of seaweeds.

ii) HAB Conference: Grant reported back on the HAB conference that was held in Cape Town last year where 400 delegates attended. The proceedings are currently in review. This will be printed by the African Journal of Marine Science and will cost approximately R300 000. Grant is currently looking for funding. If he is successful, some of the conference proceeds will be donated to PSSA. The next HAB conference is to be held in Denmark in 2006.

iii) T-shirts: John Bolton will arrange for generic T-shirts which will be sold at the next PSSA congress. J. Bolton

iv) Posters: Gavin has sent the poster designer the logo from the web page. Gavin is to get quotes on printing the posters. G. Maneveldt

v) Promoting Phycology: We need to invite as active members people working with diatoms and freshwater algae such as the group from the University of the North. We also need to encourage more members from other southern African countries. John Bolton has some email contacts. Claudio will get the emails and invite them to join the society. C. Marangoni

3. Approval of Minutes of 2004 General Meeting

The minutes were circulated at the general meeting. They were accepted (Proposed: E. Campbell; Seconded: J. Bolton)

4. Council Members Reports

Copies of all the council members reports will appear in the next newsletter.

i) President's Report: Presented by Grant Pitcher



ii) Secretary/Treasurer's Report: Presented by Wendy Stirk

iii) Membership Secretary's Report: Presented by Claudio Marangoni. It was noted that the member numbers were down. It was also suggested that the newsletter be emailed to overseas members to reduce the cost of postage.

iv) Newsletter Editor's Report: Presented by Gavin Maneveldt. Richard Pienaar proposed a vote of thanks to Gavin and this was seconded by Grant Pitcher.

5. Next Elections

John Bolton is now President of PSSA and Grant Pitcher Past President. An election must be held before the next General Meeting (July 2006). Calls for nominations will be sent at the beginning of 2006 and voting by ballot in May/June 2006. The new council will be ratified at the July 2006 General Meeting.

W. Stirk

6. Fees

These will remain the same.

7. Date and Venue of 22nd PSSA Congress

John Bolton will organize the next congress in July 2006. This will be held in Maputo and if possible, include a field trip to Inhaca Island. It is expensive to fly but possible to drive or go by train. Everyone liked the idea as it is a good way to link with other southern African countries. John will liaise with Claudio who is organizing other trips to Maputo.

J. Bolton

8. General

i) IPC8: Stuart Sym reported back on the conference. The attendance is lower than hoped for with 273 delegates. It was tough to raise sponsorship and the budget affected by the strong rand. Stuart will raise the issue of the long period from tender-to-host time with the IPS committee. About half the loan will be paid back to the IPS. The R25 000 loan from PSSA was converted to a donation. Stuart thanked everyone for their help on the local organizing committee and the Society thanked Stuart for all his efforts.

ii) Awards: No PSSA awards will be made at this conference as there were very few students attending.

iii) Vote of thanks to Grant for running PSSA: This was proposed by Richard Pienaar. Grant will present a talk as Past-President at Maputo.

iv) SAAB: The former University of Port Elizabeth is hosting the SAAB conference in January 2006 and Derek du Preez encouraged everyone to attend. If possible, he would like to have a separate Phycological Session.

9. Closure

The meeting was adjourned at 3.13 pm.

Wendy Stirk
(PSSA Secretary/Treasurer)

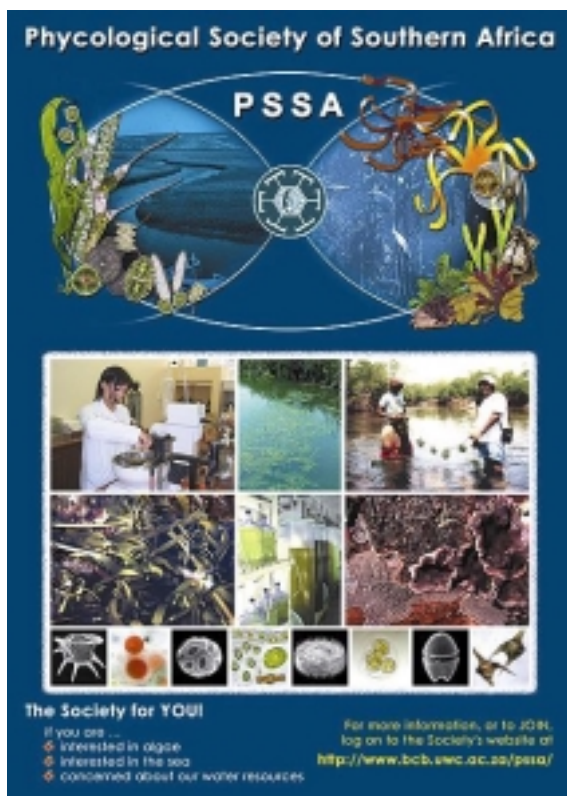


PSSA members present at the 2005 GM. From left to right: front row – Grant Pitcher (past president), Derek du Preez, Eileen Campbell, Wendy Stirk, Herre Stegenga, Richard Pienaar, Claudio Marangoni; second row/first step – Enrico Tronchin, Mark Rothman, John Bolton (president), Stuart Sym; back row – Bernadette Hubbard; Philippa Wing; Gavin Maneveldt and Robert Anderson.

News and Reviews

1. The new PSSA Poster

Alongside is what the new society poster (A3 - 29,7X42cm) looks like. Copies of the poster have been included in this edition of the newsletter.



2. 8th International Phyco logical Congress

The IPC is the flagship event for the International Phyco logical Society. The highly successful Durban Conference, held at the International Convention Centre, was hosted by the Phyco logical Society of Southern Africa, and also served as the venue for the Phyco logical Society of America's annual meeting. The scope of research using algae as subject material is rapidly expanding and the new technologies that are becoming available have lent a new aura of sophistication to the work. The Congress was attended by some 274 delegates (312 with accompanying persons) from 38 countries, which included the following eminent plenary speakers:

- *Professor Rita Colwell*, a retired and eminent microbiologist, a former President of the US National Science Foundation and a former science advisor to two US Presidents.



- *Professor Bland Finlay*, a world leader in protistology, from the Centre of Ecology and Hydrology in Dorchester.
- *Professor Arthur Grossman*, a leading molecular biologist, from the Carnegie Institution of Washington and Stanford University, California; and
- *Professor John Bolton*, a leading seaweed biodiversity expert, from the University of Cape Town.

In addition, we had 12 Symposia whose topics ranged from ‘genetics and ecology of invading seaweeds’ to ‘algal adhesion-biofilms and molecular mechanisms’. Each was convened by a leader in the field selected by an International Organising Committee, who in turn invited 4 dynamic researchers in the field. This made for an extremely interesting and diverse invited programme that filled most mornings. The afternoons were dedicated to 4 poster sessions followed by 5 parallel contributed paper sessions, each with 6 presenters. Over 100 posters were presented and 120 oral papers heard. Poster attendance was promoted by having the poster hall double as the tea and lunch venue. The Conference also hosted one workshop on *Freshwater Red Algal Identification*, which ran the weekend before the event at the Oceanographic Research Institute at Ushaka and a round table discussion that questioned the need to conserve algae. The latter was extremely interesting and will be the springboard for a publication in the near future. Another big plus for the event was the simultaneous release of the *Guide to the Seaweeds of KwaZulu-Natal* by Olivier De Clerck, John Bolton, Robert Anderson and Eric Coppejans.

The Mayor of Durban, Obed Mlaba, officially opened the Congress and Professor Rudy van der Elst, the Director of the Oceanographic Research Institute in Durban, addressed the delegates. The latter was an interesting account that highlighted

just how much South Africa has become involved in multinational collaborative research in the fishery industry with the rest of the countries of the western Indian Ocean. He was also quite honest that there was a paucity of interaction between the largely fish-based research of his institute and phycologists that obviously would stand the future in good stead were it to be addressed. I received numerous comments from delegates, including Margaret Clayton, the Chair of the International Organising Committee, that they really found his address absorbing.



Banquet guests were entertained by live homegrown talent.

The social events were also a huge success, particularly the South African Evening, which transpired to be a sumptuous meal inside the aquarium at Ushaka, the architecture of which approaches the interior of several different styles of ships, including an inverted ship wreck. The banquet was also a major highlight with a wonderful setting in the ICC and with live homegrown entertainment (actually one of the products of our local *Idols* competition, I believe) that melded smoothly into a disco. The Phyco logical

Society of America hosted an evening of snacks and drinks at the ICC and used the event to honour several esteemed phycologists, including Professors Desikachary, Paul Silva and Max Hommersand.

A large part of the success of this conference rested with the quietly assured competence of the Professional Conference Organisers, Turners Conferences and Conventions (Pty) Ltd. They are a credit to their profession and have proved wonderful ambassadors for this country.

The local organizing committee of IPC8 is extremely grateful to all their sponsors.

Stuart Sym
Co-chairperson: Local Organising Committee



3. SAAB – 2006

The 2006 South African Association of Botanists (SAAB) Annual Conference will be held on the Summerstrand South Campus of the Nelson Mandela Metropolitan University from 16 - 19 January 2006.

SAAB 2006 is drawing ever closer and the time has come to register for the conference. The last date for early registration was 1 November 2005. Registration fees are now R100 more. Please pass this message on to colleagues who may not be aware of the conference.

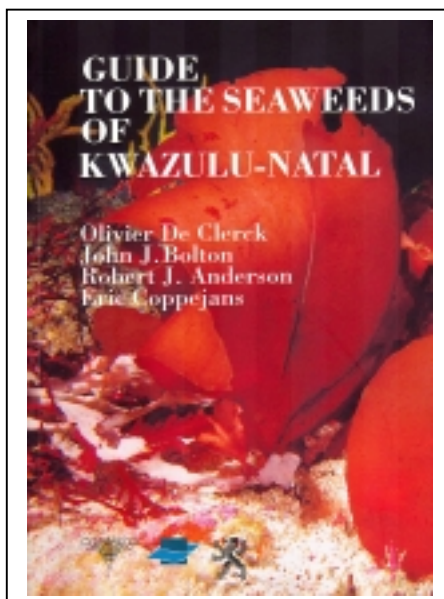
Register at: <http://www.upe.ac.za/botany/saab>

Derek Du Preez

Chairperson: SAAB 2006 Organising Committee

4. Guide to the Seaweeds of KwaZulu-Natal

This guidebook represents the culmination of a monumental effort of a team of multi-national authors. The project had the clearly defined goal of documenting the marine algal diversity occurring on the coast of the province of KwaZulu-Natal and to capture that rich diversity with equally dazzling images of the seaweeds *in situ*. A total of 205 species of seaweeds have been depicted. This number includes 129 red algae, 26 brown algae, and 50 green algae. KwaZulu-Natal is a transition zone between the warm temperate coast of the eastern Cape Province to the south and the much more tropical region of northern KwaZulu-Natal and Mozambique to the north, with its corresponding tropical composition. As such, this province proved to be an unexpectedly rich region because even though the coastline of this province makes up only about 20% of the length of the entire coastline of South Africa, well over half of the species for the entire country occur in KwaZulu-Natal, or more specifically, 508 species of the total of 850 now recognized as occurring in the entire



country. Biogeography was also a focus of this research, and it is impressive how detailed the distribution patterns are that accompany each of the species included in this work. Many of the species are fairly common, others only moderately common, and a few of them are quite rare, such as the only recently discovered species *Ptilophora coppejansii*, *P. leliaertii*, and *Shepleya elixithamnion*. From a perusal of the very specific ranges in distribution patterns, it becomes clear how much effort in the form of numerous collecting trips, numerous SCUBA dives, and attention to detail was expended (over a six-year period, 1999-2004) in accumulating such a rich source of localities for the algal species featured in this guidebook. The images of the algae stimulate even a non-diver as me to want to learn SCUBA and to enter this underwater realm with its wealth of marine life.

The authors demonstrate how two teams of workers, representing the University of Ghent in Belgium and the University of Cape Town and the Marine & Coastal Management in South Africa, can come together and can efficiently produce a book that dramatically increases our knowledge of this flora. Up to now this benthic marine algal flora was moderately well known. Seaweed exploration along this coastline goes back to the first half of the 19th century, beginning with German naturalists. More serious attention began in the 1930s with the work of T. A. Stephenson at the University of Cape Town, who, along with his wife Anne, made extensive algal collections and shared them with other researchers such as Kylin and Levring in Sweden. G. F. Papenfuss also collected around this same time, and the papers by Papenfuss and his students at the University of California in Berkeley added much to the understanding of the South African algal flora. The work done by South Africans Mary Pocock, Stan Seagrief, and Richard Simons further enlightened us on the flora, even if most of their work was on the flora of the Cape Province. The



numerous papers by Dr. Richard E. Norris (then at the University of Natal) with his discoveries of new records for South Africa as well as undescribed species, published from the mid-1980s into the early 1990s, were a major advancement to our knowledge of the algal flora of the KwaZulu-Natal.

Most of this previous literature on the algal flora of KwaZulu-Natal has been in scattered journal articles. This Guide is a synthesis dependent on past research as well on much recent intensive work. It will serve the professional as well as the ever-growing needs of those working in conservation efforts and even greatly appeal to the ecotourist or casual SCUBA diver. All will find it a most useful resource that offers them an easy entry into an alien world. This cadre of authors clearly made the most of various and disparate sources of support in producing a handbook that will be long admired for both its utility and its beauty.

Michael J. Wynne

University of Michigan, Ann Arbor, USA

Guide to the Seaweeds of KwaZulu-Natal (Olivier De Clerck, John. J. Bolton, Robert J. Anderson and Eric Coppejans) is available at this stage only from the Bolus Herbarium, UCT. To obtain a copy, please send a cheque made out to **The University of Cape Town**. The cheque must be sent to:

The Bolus Herbarium
Botany Department
University of Cape Town
Private Bag, Rondebosch 7701
South Africa

Please make sure that you provide your postal address and a contact number.

Price

Collected from the Bolus Herb.: R280

To be mailed to SA address: R 300

To be mailed overseas: R 380

Further details or purchase enquiries contact Charlene Christians at the Bolus Herbarium (cchristi@botzoo.uct.ac.za) or phone +27-21-650 3773.

Featured Article

Seaweed and monsoon rains: The SeaweedAfrica workshop in Zanzibar

One of the (few?) benefits of being a biologist is that your work sometimes takes you to exotic places. The SeaweedAfrica project, which started four years ago and ended officially in October 2005, set some sort of record, with workshops in Ireland, Namibia, Kenya, Portugal, Zanzibar and Cape Town. The EU funders (Inco-Dev section of the Fifth Framework Programme) insisted that all participants attend the workshops, in order to establish good links between the various (and particularly southern African) participants. The penultimate workshop was held in Zanzibar, Tanzania, in April 2005, and proved one of the most exotic and phycologically interesting.



SeaweedAfrica is a website that provides online information on all aspects of seaweed uses and biology that may be relevant to Africa and Africans. It went online near the end of 2004, and can be found at www.SeaweedAfrica.org. The project is essentially an extension of Prof. Mike Guiry's AlgaeBase, which is the definitive website on the taxonomy and nomenclature of worldwide



The traditional dhow with a view of Stone Town in the background.



seaweeds, and is co-ordinated by the AlgaeBase project team at the Martin Ryan Institute, National University of Ireland, Galway. The software side of SeaweedAfrica was handled by programmers in Galway and at the International Ocean Institute (University of the Western Cape, South Africa), while they and all the other partners designed the structure of the website, worked out what information should go onto it, and gathered and entered the information.

I traveled to Zanzibar with my colleagues Mark Rothman (MCM) and John Bolton (UCT), and we started our trip with two days of informal “phycoLogising” at Kendwa Rocks, a small backpacker-type of resort on the north coast of Zanzibar. After checking into our cheap but comfortable

bungalow, and dealing with a large and surprisingly fast, yellow scorpion that was inside John’s mosquito net, we headed for the beach. Despite the impending monsoon rains, we were able to enjoy good weather while we explored the tidal flats off Kendwa, armed only with Jaasund’s “Intertidal Seaweeds in Tanzania” and spine-proof footwear. There is something truly marvelous about life on tropical shores, and I became very nostalgic when the creatures we found brought back memories of two field trips to Inhaca Island, as an undergraduate at Wits in the early 1970’s. The evenings were spent applying mosquito repellent and sipping Safari beer in the beach boma. There, surrounded by European youths in flimsy beach-wear, John commented sadly “I feel like the Headmaster here ...”. At least we did not look as out-of-place and uncomfortable as the Japanese girl who, for fear of mosquitoes, never removed her full-length clothing, boots, and gloves: all this in tropical heat and humidity!

The workshop was held in the “Zanzibar Beach Resort Hotel” some distance from Stone Town, the social and commercial centre of the island. About 17 participants represented the partner countries of

Ireland, South Africa, Portugal, Sweden, Mozambique, Namibia, Kenya, Mozambique and Tanzania. The project had reached an important stage, where the last software problems were being solved and information had to be prioritized for entry, so there was much lively discussion in the several days that followed. During this time we were taken to visit the seaweed-farming operations at Paje, on the east coast of Zanzibar. There we



A Zanzibari seaweed farmer ties thalli of *Eucheuma* and *Kappahycus* to nylon lines for planting, at Paje, on the east coast of the island.

saw kilometres of large, neat rectangles of the carrageenan-producing red seaweeds *Eucheuma* and *Kappahycus* planted out over the tidal flats, and watched while local women tied plants onto nylon lines (the “tie” method) and strung them between stakes in the sand.

We also visited the Tanzanian Institute of Marine Research, where

staff presented a series of talks on marine research in Tanzania, and this was followed by discussions on seaweed farming in Tanzania and elsewhere. Tanzanian researcher Dr. Matern Mtolera filled us in on seaweed cultivation in that country. He pointed out that most farming is done on the east coast of Zanzibar (or as it is also called, Unguja Island) because the rainfall is lower there. The main species cultivated are *Eucheuma denticulatum* (industrial name “Spinousum” and a source of iota carrageenan) and *Kappahycus alvarezii* and *K. striatum* (industrial name “Cottonii” and a source of kappa carrageenan).

Seaweed farming in Zanzibar started about 20 years ago, with the import of only 4 kg of *E. denticulatum* from the Philippines. Now 3% of the population of Zanzibar is involved in seaweed cultivation, and it provides 20% of Zanzibar’s export earnings, from the more than 30 000 tonnes dry weight of seaweed that is produced annually. Seaweed farming is mainly done by women, and has greatly empowered them. A Zanzibari man is quoted as saying that “We no longer marry the women – they marry us!”



There was a lively discussion about the problems that Tanzanian seaweed farming faces. Seaweed growth rates (especially *Kappaphycus*) are lower than in the Philippines, possibly because the water is about 2°C warmer in Zanzibar, and epiphytes are a perennial nuisance. Seagrass beds have often been displaced, losing their associated fauna and flora. Relationships between companies (who often fund the commencement of farming in villages, but then control production and to a certain extent, prices) can become strained. All current farming is done at low tides, in very shallow water, but it may be possible to expand operations by developing “deep water” farming such as is practiced at Nusa Lembongan, Indonesia. There cultivation is done in water 1-2 m deep. However, Tanzanian scientists and farmers are unanimous that such a development will require investment in research, and state assistance to get it started.

Two days before the end of the workshop the monsoon rains arrived in spectacular fashion. Water streamed off roofs, and the view of the sea disappeared in a gray curtain. The hotel swimming pool overflowed across the lawn and into the patio, where men with brooms tried to push it out again. Streets became shallow rivers, and our minibus taxi gurgled to a stop when one of the main roads into Stone Town became a canal. Fortunately, although water was everywhere, it was warm, and outdoor activities were limited to trying to reach the dining area without drowning. It was still raining when we left Zanzibar two days later.

The Zanzibar workshop was interesting and productive, and once again we were able to establish new connections with other African scientists, and hear first-hand about the work they are doing. It is a pity that the project has come to an end, but the contacts made during the many workshops will soon lead to constructive collaborations between African colleagues, such as the PSSA meeting proposed for Maputo in July 2006.

Robert J. Anderson

*Seaweed Unit, Marine & Coastal Management
Dept. of Environmental Affairs & Tourism
Email: anderson@botzoo.uct.ac.za*

Conference Countdown

The next PSSA congress will be held jointly with SASAQs in Mozambique: 19-23 June 2006.

During planning for the proposed PSSA meeting in Maputo, discussed at the PSSA meeting at IPC8, it was discovered that the Southern African Society of Aquatic Scientists were planning a meeting at the same place at approximately the same time. The PSSA Committee thus decided to meet jointly with them. The dates are chosen based on the fact that venues in Maputo become extremely expensive in South African school holidays. The suggested topics are very broad, and all topics on phycology / aquatic science will be accepted (e.g. the SASAQs members of the Organising Committee consider that "ecosystems" includes all aspects of organisms present, including taxonomy). Any funds obtained by the Organising Committee for student reductions will be available to PSSA students also.

Please try to pay fees early, as we need a 50% deposit well before the meeting.

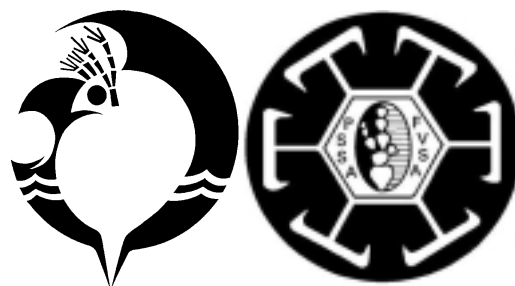
Please contact me if there are any questions about the meeting. The first circular has already been sent by email. Should you not have received one, please contact me directly, or alternatively, download the first circular from the Society's website.

I look forward to seeing many algal contributions at SASAQs / SSA Maputo 2006.

John Bolton

Chairperson: Local PSSA Organising Committee

Email: bolton@botzoo.uct.ac.za





Calendar of Events

Upcoming Conferences

1. British Phycological Society Annual Meeting. Plymouth, U.K., 4-7 January 2006.
<http://www.brphycsoc.org/>.
2. International Conference on Applied Phycology. New Delhi, India, 14-15 February 2006.
<http://www.du.ac.in/algaeconf>.
3. 21st PSSA Congress held jointly with SASAqS. Maputo, Mozambique, 19-23 June 2006.
<http://www.bcb.uwc.ac.za/pssa/conference/>.
4. 60th Meeting of the Phycological Society of America. Juneau, Alaska, 7-12 July 2006.
<http://www.psaalgae.org/>.
5. 6th Asia-Pacific Conference on Algal Biotechnology. Makati City, Philippines, 12-16 October 2006. <http://www.bio-edge.cn>.
6. 8th International Marine Biotechnology Conference. Eilat, Israel, 11-16 March 2007.
<http://imbc2007.ocean.org.il>.
7. The XIX International Seaweed Symposium (ISS). Kobe, Japan, 26-31 March 2007.
<http://www.seaweed.ie/isa/default.lasso>.
8. 4th European Phycological Congress (EPC4). Asturias, Spain, 23-28 July 2007.
<http://www.congresosasturias.com>.

