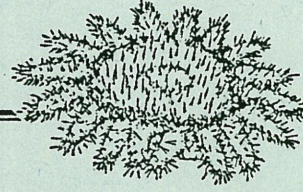


COTS COMMS

Issue Number 1

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What and Why?

Question: How do 70 scientists from 23 Australian and overseas research institutions keep abreast of what's happening in crown of thorns starfish (cots) research?

Yesterday's Answer: With great difficulty.

Today's Answer: By contributing to and reading COTS COMMS.

COTS COMMS?

This debut issue of COTS COMMS is the first of a series of newsletters, published by GBRMPA, with a view to:

- * helping cots researchers (and other interested parties) to keep informed of research in progress, as well as the progress of research;
- * providing a venue for, and encouraging, information exchange between cots workers;
- * advertising coming attractions (meetings, seminars, workshops etc);
- * reporting on relevant meetings etc; and
- * advising of publications in press.

The intention is to publish two regular issues each year (in the first and third quarters) with additional issues on an *ad hoc* basis to report on significant events such as workshops or unequivocal evidence that outbreaks are extraterrestrial visitations.

Contents of COTS COMMS will typically include the following sections (subject to availability of material):

- * Editorial and Letters to the Editor
- * Current Research
- * Calendar of Events & Coming Attractions
- * News Roundup
- * Recent Publications & Papers in Press
- * Field Trips & Available Shiptime.

Who and How?

Of course, for the newsletter to work, YOUR input is needed. This seems to be a fair deal as the aim of COTS COMMS is to help you. I'm asking all researchers directly and indirectly involved in cots research to submit a very brief summary of current work. To make it easy, summaries should address the points outlined in the enclosed pro forma.

At this point, two questions have probably sprung to mind:

- * Why write yet another "report"?
- * How can I summarise 3 years of work in a few sentences.

Firstly, it will be useful to have an up-to-date frame of reference. One of the principal reasons d'etres of a newsletter is that it is timely. Yesterday's news is just that. Research projects evolve and original titles and intentions change over time. It's important for everyone to know what you're doing NOW, as opposed to what you started to do two years ago. Who knows, writing may even help you to clarify a few points. There are too many people involved in cots research for the latest information to filter efficiently through the grapevine.

Though the length limitation will no doubt be restrictive (one or two sentences on each point), it will save both the authors' and readers' time, yet convey essential details. If you require more information on particular projects, contact the project leaders directly.

Please send project summaries to:

Brian Lassig
G.B.R.M.P.A.
P.O. Box 1379
Townsville QLD 4810

by 3 March for inclusion in Issue #2 which should hit the newstands by the end of March. Please also send any ideas, comments, literary contributions, cartoons and cash donations (joke!) to the above address.

Cots Under Review

As most of you are probably aware, Senator Graham Richardson requested a review of the cots research program following a Channel 9 "60 Minutes" program aired in November last year. The review was conducted by Professor Don Anderson, Challis Professor of Biology at the University of Sydney -- a barnacle man, essentially unscathed by cots controversies over the last 20 years.

Terms of reference of the inquiry included an evaluation of the GBRMPA's policy of limiting direct intervention to areas of special scientific or tourist interest and the adequacy of mechanisms for defining, reviewing and conducting the cots research program.

The next issue of COTS COMMS will have a close look at the results of the review and its ramifications for cots research.

Professorial Perambulation

Professor John Swan, Chairman of the Crown of Thorns Starfish Advisory Review Committee (COTSARC), is arriving in Townsville for his annual review of the cots research program at the end of this month.

Professor Carl Walters of the University of British Columbia will be in town at the same time. GBRMPA invited Professor Walters to attend a workshop on the effects of fishing to be held between 19 and 24 February. He will be staying on for the following week to advise on aspects of the cots research program, including the controversial predation issue.

In the very near future, Leon Zann or Brian Lassig will be contacting active Townsvillian cots workers to arrange times for talking to Professors Swan and Walters.

Whitsunday Update

In December last year, GBRMPA commissioned a cots and coral damage survey of the Whitsunday region because of increasing user reports of starfish in the area.

A total of 29 fringing reefs around 8 of the continental islands were surveyed.

Aggregations of several hundred cots were found on the northern fringing reefs of both Hook and Hayman Islands. It was estimated that these represented populations in excess of

1,000 individuals. Few starfish were reported elsewhere in the region.

Offshore reefs (including Bait, Hardy, Hook and Line) have since been surveyed but few starfish seen.

GBRMPA and the Queensland National Parks & Wildlife Service are working with local dive companies to control the cots in the two areas most affected because they meet the criteria for such actions.

Did You Read the One About ...?

GBRMPA has, in its possession, some 50 reports written by researchers commissioned to conduct studies into management-related aspects of the COTSAC research program. Most are unpublished in any shape or form, and the information contained therein is not getting the exposure it deserves.

A list of these reports follows. If you would like copies, please drop us a line or phone Brian Lassig on (077) 81-8811.

AIMS Access

(Contributed by Dr Peter Moran, AIMS)

AIMS has brought together data that has been collected on the crown of thorns starfish since 1982 into one database within the AIMS Oracle system. The data were collected from the following studies:

- * Studies of coral recovery on reefs affected by outbreaks;
- * Benthic surveys of 9 reefs off Townsville (CCEP 1984/85);
- * Large scale surveys of cots and corals on the GBR -- CCEP 1985/86 and COTS Study 1986/87, 87/88 & 88/89;
- * Ecological database on cots, including feeding preferences.

At present the database comprises some 500,000 individual records and represents an investment of several millions of dollars.

Techniques are being developed to enable non-specialist Oracle users to interact with the database. Procedures are being implemented to provide reports (either on the user's screen or as hard copy) using a system of menu-driven options to access and retrieve data. Knowledge of Oracle, and in particular SQL (Structured Query Language) will be required for more detailed investigations of the database.

The system and a printed technical report on the database should be completed by mid-year. For further information on the database please contact Russell Reichelt or Peter Moran (AIMS).

Everything You Wanted to Know, But ...

A third edition of best-seller "The *Acanthaster* phenomenon: An annotated bibliography" by Peter Moran and Suzie Davies of AIMS is in preparation. This latest edition incorporates some 550 references on cots, about 70 more than in the previous edition which was published in 1987.

The bibliography is being loaded into the AIMS Oracle system and work is proceeding towards producing the bibliography as a Hypercard Stack for use on Macintosh computers. Both forms should be available within the next few months. If demand is shown, a dBase version may eventuate.

Hard copy versions of the new edition will be available within the next few weeks. For further information please contact Peter Moran.

REPORTS OF MANAGEMENT-RELATED COTSAC-FUNDED PROJECTS

Baxter, I. (1987)

Green Island: Review of current knowledge. September 1987 (Draft).

Bell, R. (1987)

Assessment of the status of crown of thorns starfish *Acanthaster planci* (L.) at Credlin Reef (GBR Central Section). May 1987.

Bell, R. (1987)

Assessment of the status of crown of thorns starfish *Acanthaster planci* (L.) at Hook Reef (GBR Central Section). May 1987.

Bell, R., Kettle, B. & R. Stump (1987)

An evaluation of the effectiveness of artificial barriers for meso-scale crown of thorns management. June 1987.

Birdsey, R. (1988)

Distribution and feeding patterns of carnivorous reef fishes of the families Serranidae, Labridae, Lutjanidae and Lethrinidae.

Birdsey, R. (1988)

Large reef fishes as potential predators of *Acanthaster planci*. A pilot study by alimentary tract analysis of predatory fishes from reefs subject to *Acanthaster* feeding.

Campbell, R.S.F., Glazebrook, J.S. & S. Hall (1987)

Studies on the diseases of the crown of thorns starfish *Acanthaster planci*.

Choat, H. & M.I. McCormick (1988)

The indirect effects of *Acanthaster* and human disturbance on fish abundance patterns at Green Island: A preliminary examination.

Copeman, D.B., Glazebrook, J.S. & K.A. Licastro (1988)

Studies on the diseases of the crown of thorns starfish *Acanthaster planci*.

Coumbis, E.E. (1988)

Remote sensing component of the relationship between *Acanthaster* outbreaks and water mass characteristics in the Great Barrier Reef Marine Park. (Interim Report).

Dight, I.J., Bode, L. & M.K. James (1988)

Modelling the larval dispersal of *Acanthaster planci*: I. Large scale hydrodynamics, Cairns Section, Great Barrier Reef Marine Park. *In press in Coral Reefs*.

Dight, I.J., Bode, L. & M.K. James (1988)

Modelling the larval dispersal of *Acanthaster planci*: II. Patterns of population spread. *In press in Coral Reefs*.

Doherty, P.J. & J. Davidson (1988)

Monitoring the distribution and abundance of juvenile *Acanthaster planci* in the central Great Barrier Reef. *In press in Inter. Coral Reef Symposium 6*.

Flood, P.G. & E. Frankel (1988)

Search for evidence within surface and subsurface sediments for the occurrence of previous aggregations of crown of thorns starfish on the southern Great Barrier Reef; Capricorn Studies. (Progress Reports 1 & 2).

Ganter, R. (1987)

Oral history of human use and experience of crown of thorns starfish on the Great Barrier Reef.

Ganter, R. (1988)

The Japanese experience of north Queensland's mother of pearl industry.

Henderson, R. (1985)

The role of *Acanthaster planci* in reef degradational processes: Historical perspective and current influence. (Progress Report, December 1985).

- Henderson, R. (1986)**
The role of *Acanthaster planci* in reef degradational processes: Historical perspective and current influence. (Progress Report, May 1986).
- Henderson, R. (1986)**
The role of *Acanthaster planci* in reef degradational processes: Historical perspective and current influence. (Progress Report, November 1986).
- Henderson, R. (1987)**
Preliminary comments on the pilot dating program at INS and ANU investigating the history of *Acanthaster* on the Great Barrier Reef.
- Hopley, D. & P.C. Catt (1987)**
Use of near infra-red aerial photography for monitoring effects of *Acanthaster planci* outbreaks.
- Hopley, D. & P.C. Catt (1988)**
Use of infra-red photography for monitoring effects of *Acanthaster planci* outbreaks.
- Hundloe, T., Neumann, R. & M. Halliburton (1988)**
Great Barrier Reef Tourism. Griffith University publication.
- Hundloe, T., Vanclay, F.M. & M. Carter (1987)**
Economic and socio-economic impacts of the crown of thorns starfish on the Great Barrier Reef. (Draft).
- Johns, R.B. (1988)**
Terrigenous and anthropogenic inputs to a Cairns - Great Barrier Reef sediment transect.
- Kettle, B. (1987)**
Presurvey of John Brewer Reef: An exercise to determine crown of thorns starfish distribution prior to a joint GBRMPA/RAN eradication program.
- Kettle, B. (1987)**
Postsurvey of John Brewer Reef: An exercise to determine crown of thorns starfish distribution after a joint GBRMPA/RAN eradication program.
- Parslow, J. & T. Hundloe (1988)**
Crown of thorns risk analysis.
- Rasmussen, C. (1988)**
Effects of nutrients carried by mainland runoff on reefs of the Cairns area: A research plan and preliminary results.
- Stump, R. (1987)**
A survey of Credlin Reef, Central Section, for crown of thorns starfish.
- Sutton, D.C. (1988)**
Identification of bacterial populations associated with crown of thorns starfish and assessment of their role in the ecology of the starfish and A preliminary investigation into factors affecting the mortality of *A. planci* larvae raised under field and laboratory conditions.
- Sutton, D.C., Trott, L., Reichelt, J.L. & J.S. Lucas (1988)**
Assessment of bacterial pathogenesis in crown of thorns starfish, *Acanthaster planci* (L.). In press in Inter. Coral Reef Symposium 6.
- Valentine, P.S. (1988)**
A land use study to investigate potential agricultural chemical inputs to marine environments in the northern Great Barrier Reef Region.
- van Woosik, R., Steven, A. & L. De Vantier (1989)**
Surveys of the distribution, abundance and impact of the crown of thorns starfish (*Acanthaster planci* (L.)) on the fringing and adjacent midshelf reefs of the Whitsunday region, January 1989.
- Walbran, P.D. (1987)**
An atlas of the skeletal components of the crown of thorns starfish. GBRMPA Tech. Mem. No. 11.
- Walbran, P.D. & R.A. Henderson (1988)**
The status of the crown of thorns starfish (*Acanthaster planci*) in the Great Barrier Reef, Australia, assessed from the sediment record of John Brewer, Green Island and Heron Island Reefs. (Draft).
- Weaver, K. (1987)**
A control/eradication program of the crown of thorns starfish (*Acanthaster planci* L.).
- Weaver, K. (1987)**
Precontrol survey for crown of thorns starfish (*Acanthaster planci*): Holbourne Island.
- Weaver, K. & M. Ritchie (1987)**
Report on a crown of thorns survey conducted on reefs off Mackay, 14-22 November 1987.
- Worland, L. (1987)**
Review of control programmes against *Acanthaster planci* in Japan.

Zann, L., Brodie, J., Berryman, C. & M. Nagasima (1987)
Recruitment, ecology, growth and behavior of juvenile *Acanthaster planci* (L.) (Echinodermata: Asteroidea). Bull. mar. Sci. 41:561-575.

Zann, L. & E. Eager (1987)
The crown of thorns starfish. Aust. Sci. Mag. 3.

Zann, L. & P. Moran (1988)
A coordinated research program on the *Acanthaster* phenomenon in Australia. *In press in Inter. Coral Reef Symposium* 6.

Zann, L. & K. Weaver (1988)
An evaluation of control programs on the crown of thorns starfish *Acanthaster planci* (L.) undertaken on the Great Barrier Reef. *In press in Inter. Coral Reef Symposium* 6.

REPORTS OF ECOLOGICAL COTSAC-FUNDED PROJECTS

(Available from the Librarian or Peter Moran of the Australian Institute of Marine Science)

Baker, J. & P. Moran (1987)
A summary of research on ecological aspects of the crown-of-thorns starfish funded by COTSAC and coordinated by the Australian Institute of Marine Science. The Crown-of-thorns Study Report No. 3.

Bass, D.K., Johnson, D.B., Miller-Smith, B.A. & C.N. Mundy (1988)
Broadscale surveys of crown-of-thorns starfish on the Great Barrier Reef; 1986 to 1987.

Dartnall, J. & P.J. Moran (1987)
The *Acanthaster* phenomenon: Subject Index.

De Vantier, L.M. & G.J. Andrews (1987)
Report on surveys of the distribution, abundance and impact of *Acanthaster planci* on the fringing reefs of Lord Howe Island and the Solitary Islands. March to April 1987.

Johnson, D.B. & J.A. Stoddart (1988)
Report on surveys of the distribution, abundance and impact of *Acanthaster planci* on reefs within the Dampier Archipelago (Western Australia). April 1987.

Moran, P. (ed.) (1987)
COTSAC funded research on the ecological aspects of the crown-of-thorns starfish (*Acanthaster planci*) AIMS project proposals. The Crown-of-thorns Study Report No. 1.

Moran, P. (1987)
Priorities for ecological research in 1987/88: Recommendations to technical subcommittee (COTSARC). The Crown-of-thorns Study Report No. 8.

Moran, P.J. & S. Davies (1986)
The *Acanthaster* phenomenon: An annotated bibliography.

Moran, P. & C. Hughes (ed.) (1987)
Progress report on research: 1986/87. The Crown-of-thorns Study Report No. 7.

Moran, P. & C. Hughes (ed.) (1988)
Status report: 1987/88. The Crown-of-thorns Study Report No. 9.

Moran, P. & C. Hughes (ed.) (1988)
Proposed allocation of COTSAC funds to ecological projects in 1988/89. The Crown-of-thorns Study Report No. 10.

Moran, P. & C. Macguire (ed.) (1987)
Recommendations of Assessment Panel (CISRA) for COTSAC funded ecological research. The Crown-of-thorns Study Report No. 2.

Moran, P. & C. Macguire (ed.) (1987)
Administrative report. The Crown-of-thorns Study Report No. 4.

Moran, P. & C. Macguire (ed.) (1987)
Progress report on research: 1985/86. The Crown-of-thorns Study Report No. 5.

Moran, P. & C. Ridgwell (1987)
Proposed allocation of COTSAC funds to ecological projects in 1986/87: Recommendations to Assessment Panel. The Crown-of-thorns Study Report No. 6.

P.S.

I reckon this newsletter has about a 50% chance of succeeding. I've done my half.

COTS COMMS is edited by Brian Lassig. Views expressed are not necessarily those of the Great Barrier Reef Marine Park Authority.

COTS COMMS PROJECT PRO FORMA

Project Title:

Project Leader:
Address:

Telephone Number: ()

Objectives:

Rationale:

Achievements & Relevance:

Current Status:

Future Directions:

Problems & Needs:

Please return to Brian Lassig, G.B.R.M.P.A., P.O. Box 1379, Townsville, QLD 4810.
