



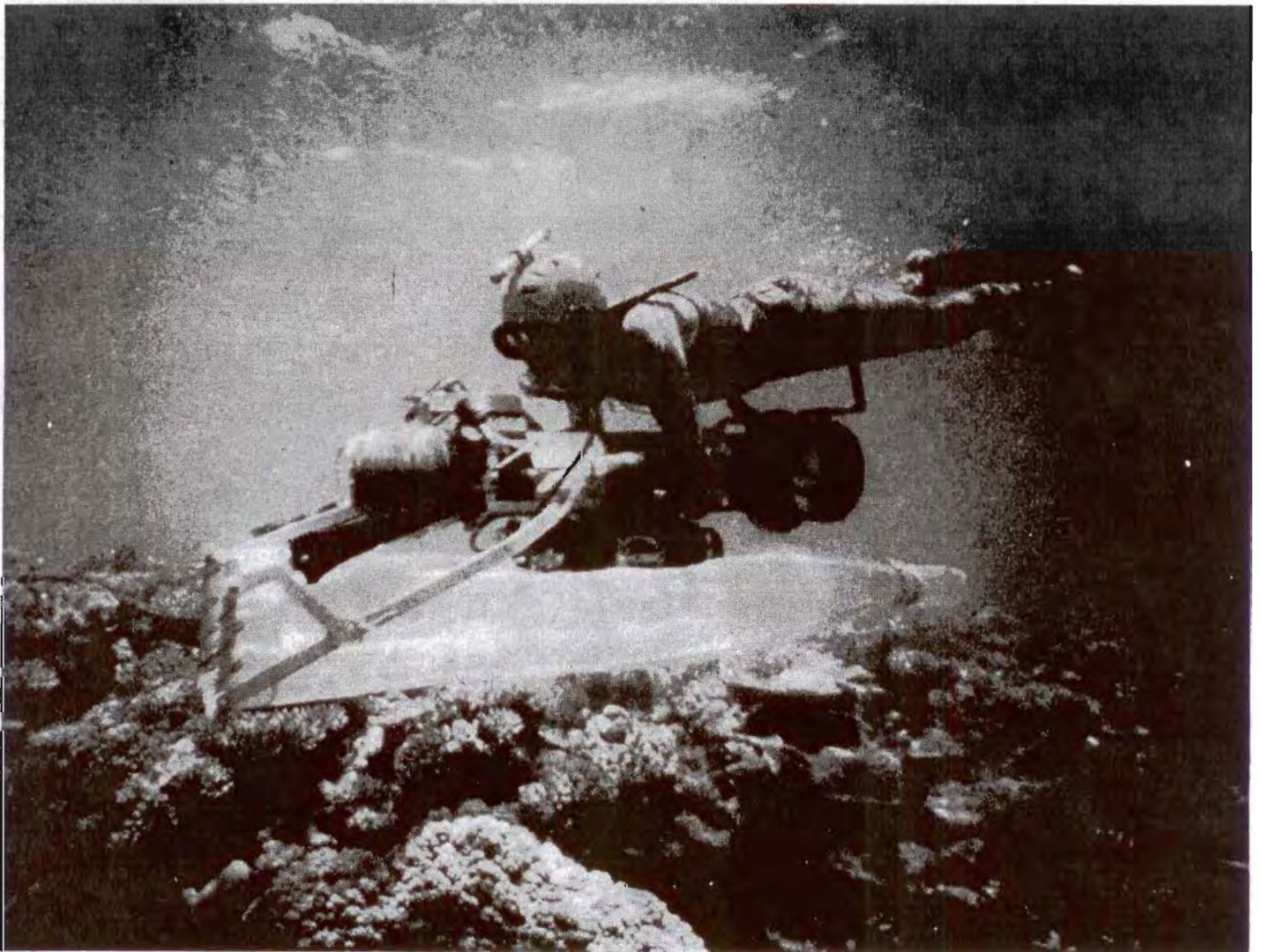
NEWSLETTER

No. 13

1986-87

ISSN 0729-0942

**LIZARD ISLAND RESEARCH STATION
GREAT BARRIER REEF**



*** HIGHLIGHTS

- *** NUMBER OF VISITORS TO STATION INCREASES
- *** NEW 6M SPEED BOAT - CONDOR CATAMARAN WITH TWIN 70 HP MOTORS
- *** OLD LIBRARY CONVERTED INTO NEW FORMALIN FREE WET LAB
- *** NEW EQUIPMENT PURCHASED WITH WEST GERMAN GRANT - Heraeus incubator, Zeiss compound microscope, Leitz epifluorescence microscope, Heraeus Biofuge A (a high speed centrifuge)
- *** L.I.R.S. 1988 FELLOWSHIPS AWARDED
- *** POST GRADUATE FELLOWSHIPS AWARDED
- *** HONOURS FELLOWSHIP INTRODUCED
- *** OUTDOOR AQUARIUM SPACE EXPANDED
- *** AIRCONDITIONED STOREROOM MODIFIED TO PHOTOMICROSCOPY LAB



Leslie Newman collecting plankton samples around Lizard Island

The Lizard Island Research Station is a facility of the Australian Museum and is dedicated to supporting research into all aspects of the biology, geology, hydrology, history and conservation of the Great Barrier Reef.

Accommodation, boats, diving equipment, a running sea-water system and airconditioned laboratories are available right on the reef to support scientists and post-graduate students with research interests in the tropical marine environment. Enquiries concerning these facilities are invited and should be addressed to the Co-Directors, Lizard Island Research Station, P.M.B. 37, Cairns, Queensland, Australia, 4871.

The Lizard Island Research Station is a non-profit organization and is not directly supported by any Government funding.

* This newsletter summarizes the activities of the station from the publication of newsletter No. 12 to 30 June 1987.

Full day and overnight rates for researchers from contributing institutions are \$25 a day less.

Contributing institutions are facilities that have made a lump sum contribution of \$3000 or more during the calendar year to the Lizard Island Reef Research Foundation. Contributions must be received before researchers commence use of facilities. Researchers from these institutions are eligible for reduced rates to the extent of the contribution.

We are pleased that so many researchers wish to use the station facilities. Our latest brochure was printed in November 1986. If you have not received a copy, please write to us.

STAFF DEPARTURES

After three years of service, Gwen and Peter Pini departed to build a house in Cooktown. We wish them the best of luck in their future endeavours.

With the coming of spring Jim and Margot Dargaville sailed south on their yacht Kermandie.

We wish all who shared the challenges of Lizard Island Research Station the best of luck in their efforts.

NEW ACCOMMODATION AND MAINTENANCE OFFICER APPOINTED

Shirley and Barrie Trett arrived in mid July. Barrie has previously worked at James Cook University in the Civil Engineering Department and brings with him a diversity of useful skills and enthusiasm. Both he and Shirley spent a year at Orpheus Island resort developing their skills in island psychology. Shirley was in charge of the cleaning staff and Barrie was in charge of maintenance.

POST-GRADUATE SCHOLARSHIPS

Mr K.D. Clements from James Cook University has been awarded the 1987 Lizard Island Research Station doctoral fellowship to work on herbivory in newly settled reef fishes. He will be supervised by Professor J.H. Choat and Dr D. Williams.

This fellowship is offered to both Australian and foreign students studying for a PhD. They are valued at \$12,000 (\$4,000 over 3 years) and cover travel to the island, bench fees and some equipment. For further details about the fellowship contact: Director, Australian Museum, PO Box A285, Sydney South, N.S.W. 2000. Applications close in late November. For details about facilities at the Lizard Island Research Station contact the Co-Directors.

BUSY TIME FOR STATION

For the twelve months ending on 30th June the station experienced an increase in usage of facilities of 125% over the previous year. November was the busiest month ever experienced by the station with a mean of 18.5 people using the facilities per night. The previous maximum was 14.6 people. For a while we had 24 scientists at the station, well above the optimal maximum number of 15.

When it is spring on the Great Barrier Reef many reef organisms reproduce and it is difficult to refuse scientists whose research revolves around these reproductive events. Co-operation was the key success and everyone was able to accomplish their research. However, we do intend to try to keep the numbers down as too many researchers are a strain on facilities, other researchers and staff. Additionally, there is currently one less house available for researchers as Captain Matt and Mipi Jumelet have assumed residence on the island.

Those of you intending to use the station during our busy months November to February and July and August should book early. Deposits of 10% of your estimated bench fees will allow us to confirm your bookings for both the station and RV SUNBIRD. Deposits are refundable should you cancel up to 2 months before your anticipated arrival.

Inflationary pressures have necessitated an increase in bench fees for full rate researchers and RV SUNBIRD users from 1 January 1988. Bench fees for students and members of contributing institutions will not increase.

BENCH FEES FROM 1 JANUARY 1988

All fees are in Australian dollars. As of 30 June 1987 \$A1.00 = \$U.S.0.71.

Research Station

Full rate researchers \$60. A \$5 per night discount is given if payment is received within 30 days of invoicing. This fee reduces to \$40 after 30 days of usage in a calendar year.

Contributing institution researchers \$40. Please write to the Co-Directors if your institution is interested in becoming a contributing institution.

Students working on their own research \$16.50.

R.V. Sunbird

Full day, overnight usage	\$450
Full day 8 hours	\$350
Half day 4 hours	\$200

The first Lizard Island Honours fellowship has been awarded to Ms A. Hemsley from Griffith University to work on the biochemistry and molecular genetics of toxin granule proteins isolated from molluscs of the family Conidae. Dr D. Maguire will supervise the project. Ansett and Air Queensland have kindly provided assistance with travel for the fellowship.

The fellowship is valued at \$2,000 and covers bench fees and assists with travel to the station. Applications for fellowships to be awarded for 1988 close in late November.

NEW SKIPPER OF RV SUNBIRD

Captain Matt and Mipi Jumelet joined the station at the end of October. Matt has over 20 years experience in Coral Sea waters and brings a wealth of practical mechanical as well as sailing knowledge with him.

RV SUNBIRD assisted Dr Peter Doherty's survey of Acanthaster on reefs off Townsville as well as assisting AIMS researchers (lead by David Johnson) in an Acanthaster survey from Moriliyan to Princess Charlotte Bay. Crown of Thorns where are you? Additional cruises involved assisting in a turtle project with Queensland National Parks and Wildlife Service on Raine Island and other coral bays to the north of Lizard Island.

TOURS

The station tours are popular, attracting over 1200 people during the year. Although most of the visitors are from the Lizard Island Lodge, yachties, campers, passengers on the M.V. Coral ReefTel and the M.V. Noel Buxton and the Operation Raleigh volunteers also dropped by.

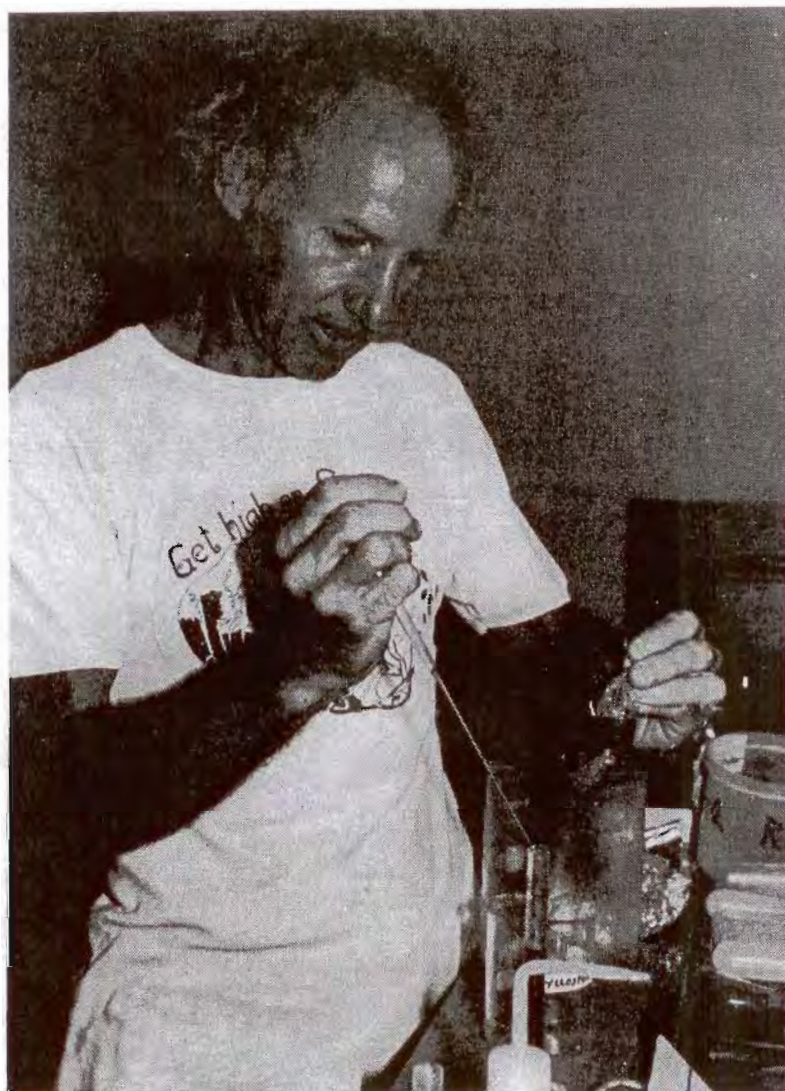
TRAVEL INFORMATION

QANTAS TRAVEL INFORMATION

Examples of low season excursion (Ex) and Apex (Ap) round trip fares on QANTAS are:

To Cairns

Auckland Ap	NZD793	1 June	- 31 July
Harrare Ap	ZWD2905		
Singapore Ex	SID727	16 Jan	- 21 Nov
London Ex	UKL818	1 March	- 30 June
Honolulu Ap	\$US836	1 April	- 30 Nov
Los Angeles Ap	\$US1046	1 April	- 30 Nov*
San Francisco Ap	\$US1046	1 April	- 30 Nov*
Vancouver Ap	\$CA1447	1 April	- 30 Nov
Tokyo Ap	\$Y218,000	1 - 24 April,	
		6 Mar - 19 July	
		1 Sep - 30 Sep	



Assoc. Professor A.W. Larkum separating pigments for analysis with the station's spectrophotometer.

*With the above fare levels you can fly on from Cairns to Brisbane and Sydney and then return to the States.

Shoulder, peak and economy fares are of course higher. Please call QANTAS for latest fares!

UNITED AIRLINES TRAVEL INFORMATION

United Airlines offers the same fares from the U.S.A. and Canada, with the entry point in Australia being Sydney. Return domestic travel from Sydney to Cairns is included in the fare.

All of these fares are subject to a 14 day advance purchase condition and travellers must stay at least six days and not more than six months. Reservations for the journey must be made when

the ticket is purchased and cannot be changed. Changes to the return journey are permitted on 14 days notice.

If you are booking these fares through your travel agent the fare code is BLAB for fares valid April to November and BHAB for fares valid from December through to March.

Scientists from other cities should contact United for help in making connections to United's Australia services. United crosses the Pacific to Australia ten times a week.

United says it is mindful of special needs with excess, bulky or fragile scientific equipment. United Air Cargo will be able to help you with packing information and shipping details.

INTERNATIONAL TRAVELLERS RECEIVE 15% DISCOUNT ON AIR QUEENSLAND

International travellers to Australia are eligible for a 15% discount on Air Queensland flights. You may purchase these tickets either from your travel agent or locally in Cairns. The price of a discounted one way ticket CNS - LNZ purchased in Cairns is \$91.

For researchers entering Australia at a port other than Cairns, both Ansett and Australian offer a 30% discount on their economy class tickets.

STUDENTS UNDER 26 YEARS OLD RECEIVE DISCOUNT

Students enrolled at a university are eligible for a 25% discount on Australian, Ansett and Air Queensland airlines.

DISCOUNTS FOR DOMESTIC RESEARCHERS

Ansett and Australian Airlines have generously offered discount air fares to assist scientists whose funding has fallen short of requirements and who wish to travel to Cairns to undertake studies on the Great Barrier Reef at the Lizard Island Research Station.

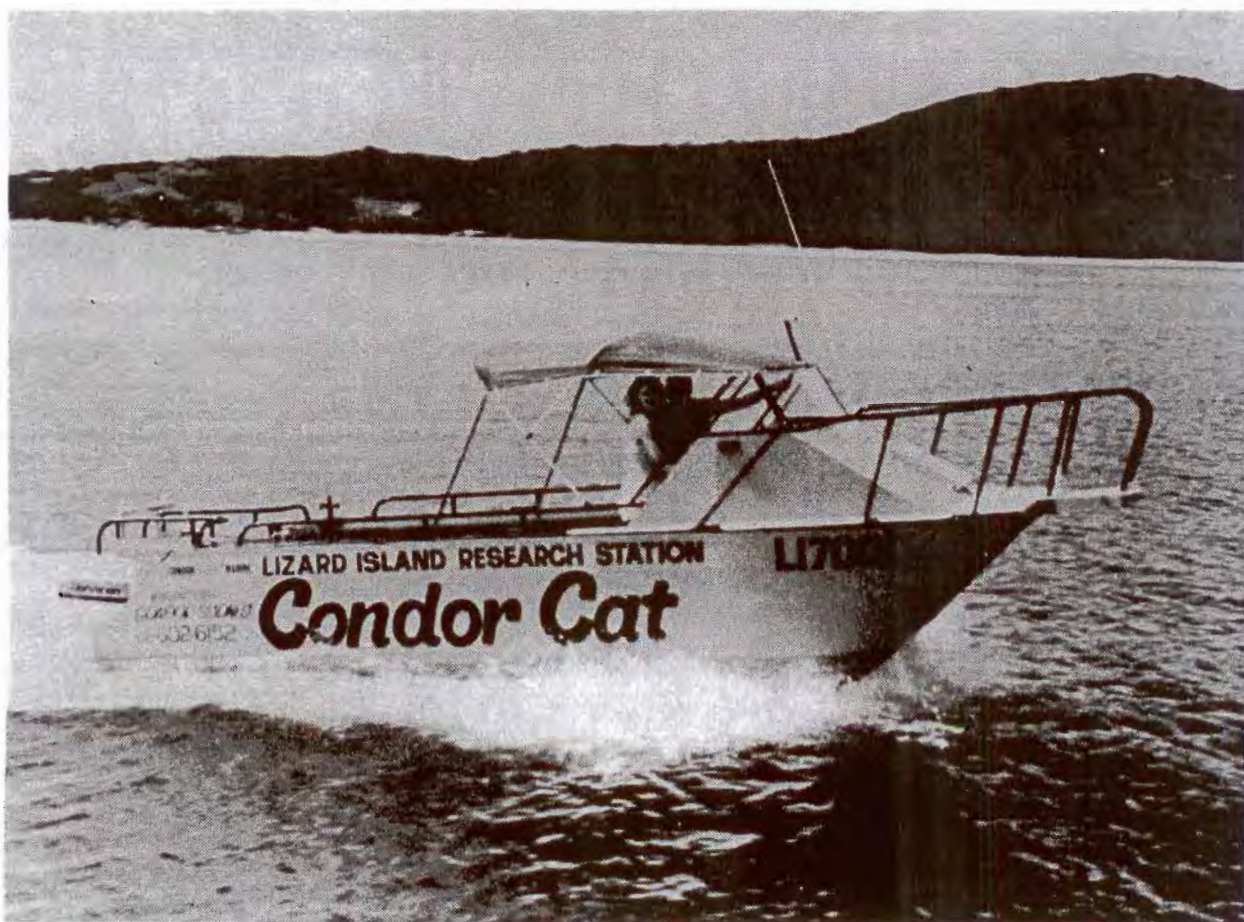
The Co-Directors of the Lizard Island Research Station approve requests on the basis of need and scientific merit.

In order to take advantage of this scheme please send a copy of your research proposal to the Co-Directors of the Lizard Island Research Station. Indicate the source of funding for your project and why travel assistance is required.

You may either apply for a 50% reduction on a confirmed ticket with Australian Airlines or a 75% discount on a standby ticket with Ansett. These discounts apply on the published economy fare between your base location and Cairns. The ticket is not transferable. This does not include the cost of travel from Cairns to Lizard Island. The arrangement is under the management

of the Cairns Offices of Ansett and Australian Airlines where authority for the discount is issued. Please indicate in your letter to the Co-Directors which discount you wish to apply for.

We will advise you if your application has the support of the Lizard Island Research Station. If so, you will be sent a letter of introduction which you should send along with your proposal to the Manager of the respective airline offices in Cairns. The final approval for your travel discount comes from the airline managers.



The station's new 6m CONDOR CAT with twin 70 hp Johnson engines provides greater access to neighbouring reefs.

We hope that the assistance offered by Ansett and Australian Airlines helps you in your efforts to understand the Great Barrier Reef.

AIR FARES

There was a fare increase in domestic airfares. Examples of full fare one way economy tickets are listed below:

From	To Cairns	From	Cairns
Sydney	\$308	Darwin	\$318
Melbourne	\$370	Adelaide	\$378
Brisbane	\$248	Hobart	\$410
Townsville	\$100	Perth	\$430
Lizard Island	\$107		

Discount fares are available to organized domestic researchers. Both airlines offer an AIR PASS which allows for up to 6000 km of travel in Australia for \$540. The restrictions require you to make one stop over in addition to Cairns and be away from your point of origin for a least 10 days. Why come to Lizard Island for less than a week?

Additional discount plans with various restrictions include Excursion 45 (45% off but only day of flight can be nominated), Super APEX (35% off, advanced payment and booking of forward and return flight, - no changes), Standby (20% off), Students Group B (under 26 years, 25% off), Common interest group (10 people 15% off). Please see your travel agent for the details and restrictions.

Surface Travel to Lizard Island

The M.V. Noel Buxton offers space available travel from Cairns to Lizard Island for \$55. The Noel Buxton departs from the Cairns wharf every Monday at 2000 and arrives at Lizard Island at 11am the next day. She then continues on to Thursday Island and returns to Cairns without stopping at Lizard Island. Reasonable amounts of cargo may be carried at no additional charge.

Cargo to Lizard Island

Non-perishable food and other cargo can also be transported via the Noel Buxton at rates slightly higher than on R.V. Sunbird.

RESEARCH

Dr Hugh Sweatman of the University of New South Wales received a 1988 Lizard Island Research Station fellowship. He spent November and December working on the process by which juvenile fish come to live on a coral reef. Hugh is studying the juvenile three-banded humbug fish (Dascyllus arrianus). They are less

than 8 mm long when they settle on a reef. Their small size suggests that they are weak swimmers, yet they are very selective about the kinds of places where they will settle. They only settle in living colonies of a few species of branching corals. They are more likely to settle in corals that already have resident humbug fishes. High is looking for evidence that larvae choose settlement sites using dissolved chemical cues. He used plastic piping and a small electric pump to draw water from around corals with resident fish and fed this water to corals about 20m away that did not have any resident fish. This allowed him to separate any chemical stimulus from the stimulus of the presence of humbug fish.

Ms Leslie Newman is a PhD student from the University of Queensland interested in the biology of pteropods. She believes that they may be responsible for concentrating phytoplankton toxins such as ciguatera. Leslie collects plankton by towing nets. The fragile animals are identified, sexed and stomach contents observed while they are still alive. Most of them are too delicate to preserve and examine later. Her research is supported by a grant from the Australian Museum and travel costs have been subsidized by Ansett Airlines.

Another student from the University of Queensland working at the station is MSc candidate Andrew Page. He is studying the feeding behaviour and biology of shellfish that feed on the body tissues of stony corals. These shellfish have specialized mouth parts for probing into coral polyps and parts of the digestive tract are lined with cuticle to protect them from nematocysts. Species of Drupella are voracious predators. In Japan and the Philippines their numbers increased to devastate large areas of reef. Drupella are not yet abundant on the Great Barrier Reef. Andrew will obviously be riding the top of the crest when COTSAC gives way to Drupella Mollusc Action Committee (DMAC). Andrew's field work is supported by a grant from the Great Barrier Reef Marine Park Authority with travel assistance from Ansett Airlines.

Dr Mark J. Grygier, a visiting fellow at the Australian Museum on leave from the Smithsonian Institution, visited the station in February. He was continuing his worldwide taxonomic study of the Ascothoracida, a group of parasitic crustaceans related to barnacles. These animals infest mainly echinoderms and coelentrates. Mark found two species of coral, Heteropsammia cochlea and Turbinaria sp. infested by gall-forming ascothoracidans. Additional parasitic and commensal snails, worms and other crustaceans were found and will be distributed to other specialists. Mark's field work was supported by the Australian Museum. Australian Airlines assisted with travel costs.

Associate Professor A.W.D. Larkum and Dr Guy Cox have recently extended their work on the algal symbionts of sponges, begun at Heron and One Tree Islands to Lizard Island reefs. Previous work

has indicated that sponges harbour novel types of blue-green algae. These algae contain red protein pigments (phycoerythins) which show resemblances to both blue-green algae and to red algae, and are therefore of possible importance in tracing the evolutionary pathway from blue-green to red algae. The work at Lizard Island has revealed yet other groups of novel blue-green algae with the intermediate phycoerythins. It is becoming apparent that such algae are much more widespread and more diverse than previous suspected. This research is supported by a Lizard Island Fellowship from the Australian Museum.

The tables below summarize : 1) station visitor statistics, and 2) usage of R.V. Sunbird for the past two years from July to June.

Table 1	'85 - '86	'86 - '87
Total number of researchers and assistants	56	152
Number of Australian researchers and assistants	29	37
Number of foreign researchers and assistants	20	87
Number of postgraduate students and assistants	7	28
Mean # of researchers per day	4.0	8.0
Mean # of all visitor per day	4.9	8.7

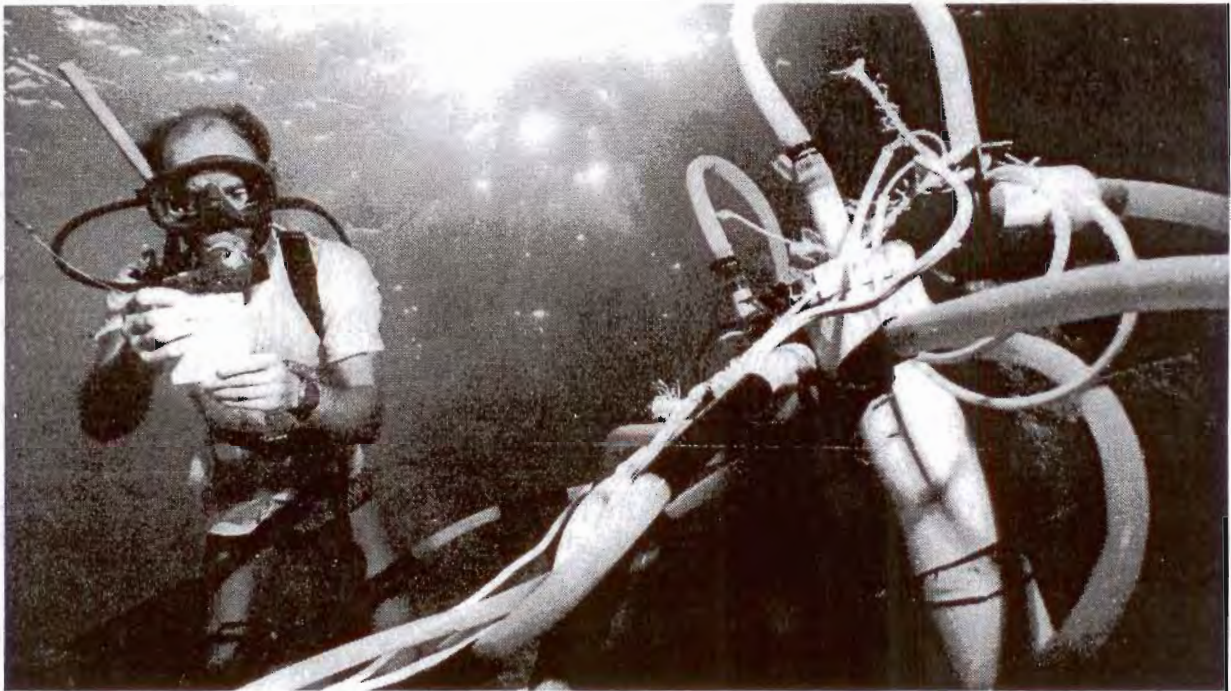
Table 2	'85 - '86	'86 - '87
Number of days away from island on station business	50	115
supporting researchers	60	128
Mean number of researcher on board per night		1.1
Totals nights	110 nights	243

FUTURE DEVELOPMENTS

Don't hold your breath, but Telecom has promised (threatened) a telephone on the station by mid 1988.

Acquisition of new aluminium dinghy.

The nature of station accommodation expansion is currently being discussed. Visitors who have an opinion about future direction should please make it known to the Co-Directors.



Dr Hugh Sweatman studies his manifold which pumps chemical cues to his standard coral units.

Research visitors to the station, together with their institution and project, are listed below.

AUSTRALIAN SCIENTISTS

R BRALEY, James Cook University, Townsville (assisted by S WESTMORE, W NASH and MUIR). Mapping a major recruitment of Tridacna gigas juveniles and tagging individual recruits.

J CHOAT (assisted by D FURLANI), James Cook University, Townsville. Recruitment patterns in herbivorous fishes with analysis of pre and post-settlement abundances.

P DAVIE (assisted by J SHORT), Queensland Museum, Brisbane. Collection of crabs in general, and the family Xanthidae in particular, for taxonomic research.

P DOHERTY (assisted by M DOHERTY, J LEIS and N PRESTON), Griffith University, Brisbane. Community ecology of reef fishes and spatial investigations of larval fishes.

M GRYGIER, Australian Museum, Sydney. Ascothoracidan parasites of certain echinoderms and corals.

R HILLER, Macquarie University, Sydney. Pigment proteins in algae.

J HOLMES, University of Queensland, Brisbane (assisted by B HOLMES). Assessment of coastal national parks and reserves in northern Queensland.

P HUTCHINGS (assisted by M REID), Australian Museum, Sydney. Continuation of bioerosion studies and polychaete spawning.

R KELLEY, Sir George Fisher Centre, James Cook University, Townsville (Principal Investigator - P MURPHY) assisted by R McCAULEY, L EVANS, P ILLICH and S SOROKIN). Collections for the National Cancer Institute.

A LARKUM and G COX, University of Sydney, Sydney (assisted by T DIBBAYAWAN and H LARKUM). Novel prokaryotes of sponges.

J LOWRY (assisted by R SPRINGTHORPE), Australian Museum, Sydney. Bioluminescence in certain lysianassoid amphipods.

R OLSEN (assisted by E LYDECKER, R McPHERSON, K OSBORNE, R DIXON), Australian Institute of Marine Science, Townsville. Larval settlement studies of Acanthaster planci.

H SWEATMAN, (assisted by J ST JOHN). Settlement cues used by juvenile humbug fish.

D WALKER, University of Western Australia, Nedlands. Examination of seagrass distributions for comparison of scales of patterning

in temperate and tropical systems.

FOREIGN SCIENTISTS

T ALLEN (assisted by M DOWEY), University of Alberta, Edmonton. Collection of sponges for anti-cancer activity.

R CALDWELL, (assisted by E & M CALDWELL), University of California, Berkeley. Chemical mediation of aggressive behaviour in stomatopod crustacea.

E ERNST, New York Zoological Society, New York (assisted by A SLATER). Collections of Great Barrier Reef fishes for a display at the New York Aquarium.

D FORK, Carnegie Institution of Washington, Stanford, California (assisted by J., L., P. and S. FORK). Use of fluorescence assay to detect the presence of chlorophyll c in algae living symbiotically in sponges. Algae were sought that contain both phycobilin pigments and chlorophyll c - so far unknown - that may be the progenitor of all algal groups having chlorophyll c.

R GALZIN, Laboratoire de Biologie Marine et Malacologie, Paris. Comparison between French Polynesian and Australian coral reef fish communities.

M HAY (assisted by E DUFFY), University of North Carolina, Chapel Hill. Food selection in herbivorous fish.

N HOLLAND (assisted by L HOLLAND), Scripps Institution of Oceanography, La Jolla. Videotaping the small scale events of crinoid feeding behaviour.

K MATSUURA, Tokyo Museum, Tokyo. Systematic studies of boxfishes and pufferfishes.

J NURSALL, University of Alberta, Edmonton, Alberta, Canada (assisted by M NURSALL AND M LABELLE). Behavioral interactions of shallow-water blennioid fishes - comparisons with Caribbean communities.

M PEYROTE-CLAUSADE (assisted by P PICHON), Centre d'Océanologie de Marseille, Marseille. Variation in boring assemblages in Porties skeletons.

H-D PFANNENSTIEL, Freie Universität Berlin, W. Germany. Sexual conditions in hippolytid crustaceans.

J POINTIER (assisted by R POINTIER), Laboratoire de Biologie Marine et Malacologie, Paris. Comparison between the French Polynesia, French West Indies and Australian ecology of molluscs.

M RICHARD (assisted by R RICHARD). Museum National D'Histoire Naturelle, Paris. Metabolism of coral reef ecosystems.

C ROPER (assisted by I. E and C. Roper), Smithsonian Institution. Color and body patterns and associated behavior in the blue ring octopus and flamboyant cuttle fish.

A SCHWARZ, Independent Consultant and J DOWNHOWER, Ohio State University, Columbus. Assistance was provided by L BOTES, M AND G MOCK, M SELIGMAN, F HEMINGWAY, P MORTON, R AZWELL, K DEAN, H DENISON, M GARVIN, B KULZER, J CHANIN, D GOLDNER, A GRIGSBYU, J AND M HAGGART, J LEWIN, K WILLIAMSON from Earthwatch. Variation in social structure and sex change in Dascyllus reticulatus.

G SMITH and O HOEGH-GULDBERG, University of California, Los Angeles, Calif. Coral Ontogeny: Interactions between coral bioenergetics and population dynamics of symbiotic zooxanthellae.

D SHAPIRO, University of Marine Sciences, Puerto Rico. Serranid social group interactions.

Y SOROKIN, Institute of Oceanology, USSR. Heterotrophic microplankton distributions and abundances.

L SPARLING, PHS, Phoenix, Arizona. Site investigation of geothermal energy sources.

R STRATHMANN, Friday Harbor Laboratories, Friday Harbor, Wash. Distribution of Spirobranchus spinosus relative to ambient currents and feeding mechanisms of marine invertebrate larvae.

K SULLIVAN (assisted by the enthusiastic students of her Earth and Sky program), University of Miami, Miami. Crinoid distributions.

W TESTA, University of Alaska, Fairbanks, Alaska (assisted by L BANISH). Pilot survey looking for model organisms for research on age-class interactions.

W VADER (assisted by A, J AND M VADER), Tromso Museum. The biology and host specificity of lichomolgid copepods of echinoderms.

R.V. SUNBIRD SCIENTISTS

J BAKER (AIMS), DR AND MRS FARRAND, G KELLEHER (GBRMPA), DR AND MRS TEGGART. Inspection of Great Barrier Reef.

J DAVIDSON (Principal Investigator P DOHERTY), Griffiths University, Brisbane with five assistants. Survey of juvenile starfish in reefs off Townsville.

D BRUNKHURST, Australian Institute of Marine Science, Townsville, with three assistants. Macro survey of Acanthaster populations from Cairns to Princess Charlott Bay.

P DOHERTY, Griffiths University, Brisbane; J CHOAT, James Cook University, Townsville and J LEIS, Australian Museum, Sydney (assisted by N PRESTON AND M DOHERTY). Comparison of the fishing efficiency of three types of gear used for sampling larval fishes.

R KELLEY (Principal Investigator P MURPHY) and four assistants. Collections of marine organisms for the National Cancer Institute.

J LEIS, Australian Museum, Sydney. Larval fish ecology.

NBC TV with R AND V TAYLOR shooting sequences at the Cod Hole.

F TALBOT (assisted by S TALBOT), California Academy of Sciences, San Francisco. Coral fish communities.

Queensland National Parks and Wildlife, Townsville. Monitoring turtle nesting on Raine Island and northern reefs.

Queensland National Parks and Wildlife Service, Cairns. Survey of giant clam deaths.

R WILLIS and five assistants, James Cook University, Townsville. Chemicals of soft corals.

POST-GRADUATE STUDENTS

R BRALEY, University of New South Wales, Sydney. Reproduction and recruitment of giant clams and dietary preference of their larvae.

R BIRDSY, James Cook University, Townsville. Feeding behaviour of fish.

J CHISHOLM (assisted by L WILSON), James Cook University, Townsville (recipient of a Lizard Island Research Station Doctoral Fellowship). The role of coralline algae with special emphasis on their growth and reproduction in coral reef ecosystems.

K CLEMENTS, James Cook University, Townsville. Herbivory in newly settled reef fishes.

L DEVANTIER, University of Queensland, Brisbane. Survivorship of massive Porites colonies in relation to the distribution and life history of Spirobranchus giganteus.

T DONALDSON, Louisiana State University, Baton Rouge, LA. Social organization, reproductive behavior and mating systems of hawkfishes (Cirrhitidae), with emphasis on geographic variation.

L GOGGIN, University of Queensland, Brisbane. Causes of mortalities in giant clams.

T FROMM, Freie Universitat Berlin, W. Germany. Sexual conditions in hippolytid crustaceans in field populations and laboratory cultures.

A HEMSLEY (assisted by N DAVIS AND M JONES), Griffith University, Brisbane. Toxicity studies in piscivorous cone shells.

A LEONARD (assisted by L LEONARD), Scripps Institution of Oceanography, La Jolla. Feeding mechanisms of crinoids.

M MILICICH (assisted by R GARDINER, M McCORMICK, A PAGE AND L WHITELEY), Griffith University, Brisbane. Larval fish recruitment using light traps.

M MEEKAN, Griffith University, Brisbane. Fish recruitment on disturbed reefs.

L NEWMAN, University of Queensland, Brisbane (assisted by R ADLARD, L HUNTER, L McCAFFERTY). Holoplanktonic molluscs from the Great Barrier Reef.

A PAGE, University of Queensland, Brisbane. Feeding behaviour and biology of gastropods which feed on the body tissues of scleractinian corals.

A STEVENS, James Cook University, Townsville. Feeding behaviour of herbivorous fish.

M STAFFORD SMITH, University of York, York, GB (assisted by M MOLISON). The effects of sediment stress on scleractinian corals.

A THRESHER, University of Sydney, Sydney. Social behavior, ecology and reproductive biology of Chrysiptera cyanea (Pisces: Pomacentridae).

OTHER VISITORS

G BAKER, Australian Museum, Sydney. Cataloguing and rationalising station library.

B DAWSON and ten members of the Queensland Wildlife Preservation Society, wildlife experience on the Great Barrier Reef.

G BLACKLEDGE (assisted by P CROLL AND FNQTV). Production of Lizard Island Research Station promotional video.

T BOSSOMAIER, Australian National University, Canberra. Inspect and repair solar and wind energy measuring equipment.

B BUTTERWORTH, Leitz Technical Representative, Cleaning and repair of microscopes.

L CAREY AND H HALL, All Environment Productions/Carey Films, La Jolla, Calif. Filming corals spawning both in aquaria and on the reef for a production about coral reefs of the world.

M DENEGA, Placerville, Calif. Day trip for station inspection.

B AND M DUROSE, Beacon Software, Cairns. computer consultant.

K FUJIWARA (assisted with 15 members of the Japanese ABC television team and Ben Crop on the CALL OF THE WILD). Filming marine science workers in Australia for Japanese television.

E FINK, Coldmasters, Cairns. Repair of airconditioning and refrigeration equipment.

FNQTV, Cairns. Shooting KIDS ARMY episode.

B GOLDMAN AND K DOUGLAS, Cairns. Temporary skipper and crew of RV SUNBIRD.

D GRIFFIN, Australian Museum, Sydney. Research Station inspection.

P AND N HOFF, Donors to the station.

J KERIN AND J VERA, Minister for Primary Industry. Survey of barrier reefs fishing grounds and station facilities.

R LACHLAN, Scotts Primary School, Sydney. Northern Australian coastal tour in small speed boat, collecting insects and recording experiences for Australian Geographic.

T MACDONALD, IME, Cairns. Overhaul of generators.

UNIVERSITY OF QUEENSLAND BIOLOGICAL SOCIETY, seven members, marine field studies.

WORK EXPERIENCE PEOPLE

I ANDREWS, K BEESTON, E BOHME, J BURN, A COLIN, V GAY, P KELLEY, L NEWMAN, P PICHON, B POWERS AND M STAFFORD-SMITH.

PUBLICATIONS TO 30 JUNE 1987

Since the issue of Newsletter No. 12, we have received a further 32 reprints bringing the total to 221. These publications are listed below. A complete list is available - please write if you are interested. Also, those of you who have published papers on work done while at Lizard Island Research station and who have not sent us copies, please do so soon. We would appreciate two copies of each reprint.

ALDENHOVEN J, 1986. Different reproductive strategies in a sex-changing coral reef fish, Centropyge bicolor (Pomacentridae). Aust. J. Mar. Freshw. Res. 37(3): 353-360.

ALDENHOVEN J, 1986. Local variation in mortality and life expectancy estimates of the coral reef fish Centropyge bicolor (Pisces: Pomacanthidae). Marine Biology 92: 237-244.

BOON P I, 1986. Uptake and release of nitrogen compounds in coral reef and seagrass, Thalassia hemprichii (Ehrenb.) Aschers., bed sediments at Lizard Island, Queensland. Aust. J. Mar. Freshw. Res. 37: 11-19.

BRALEY R D, 1987. Report on a giant clam recruitment mapping survey at Lizard Island in early April 1987. Report to the Great Barrier Reef Marine Park Authority, p. 8.

BRUCE N L, 1986. Cirolanidae (Crustacea: Isopoda) of Australia. Records of the Australian Museum, Supplement 6: 1-239.

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1. Have you ever visited Lizard Island Research Station?
Yes No If yes, in what year?

If you have not visited the station or used R.V. SUNBIRD please answer question 13 only.

2. What items of equipment are most important to your research at the station?
3. If they aren't already on the station, which would you like to see obtained first?
4. If you could improve the accommodation, what would you do?
5. What do you think is the maximum number that you would like accommodated with you in a bungalow? In each room?
6. What do you think is the maximum number of researchers the station should cater for.
7. If accommodation was to be increased, what form should it take? Please comment on the suggestions below and add any ideas of your own under (d).
 - a) Another bungalow in the style of the newer ones on the station.
 - b) In addition to a new bungalow, construction of a coffee/common room.
 - c) Modification of Suntory into motel style accommodation (4 bedrooms) and construction of a building housing two kitchens and a coffee/common room.

- d) Your suggestion.
8. Have you ever used R.V. SUNBIRD? If so, in what ways could we improve her? What do you think the 24 hr daily share cost fee should be?
 9. If you haven't used the R.V. SUNBIRD for your research, why not?
 10. How would you compare the Lizard Island Research Station to other stations around:
 - a) The Great Barrier Reef
 - b) the Caribbean
 - c) the world
 11. Name at least one aspect of the station that you would not like to see changed.
 12. Name at least one aspect of the station that you would like to see changed and indicate how?
 13. If you have not visited the station, what would attract you to use these facilities?

Thank you for taking the time to help us make the station a better place to do research.