

LIZARD ISLAND RESEARCH STATION
p.m.b. 37, cairns, qld., 4870, australia.



Newsletter No. 7

1980 - 81

. prime minister visits and dives

THE GREAT BARRIER REEF

. new AMINO ACID discovered

CORALS reproduce in aquaria

new populations crown of thorns?

. LIQUID SCINTILLATION COUNTER !

spectrophotometer !

FREEZE DRYER !

. \$100,000 donation for R.V. SUNBIRD

TROJAN gets hydraulic trawling gear

purchase of RIVER TRUCK

. winners of

WILD-LEITZ AUSTRALIAN

PHOTOMICROGRAPHIC COMPETITION

PHOTOGRAPHIC AWARD:

Working in conjunction with the Director, Mr Roger Steene, a world renowned underwater photographer won the Wild/Leits Australasian photomicroscopic competition for 1981 using the new Wild M400 photomicroscope. The winning photo of a small tropical planktonic crustacean Saphirina opalina is, as the name implies, truly a gem. Specimens were taken from Dr Leis' Ichthyoplankton collections. Mr Steene also received high commendations for four of his other photos.

PRIME MINISTER'S VISIT:

In June 1980, the Prime Minister of Australia, Mr Malcolm Frazer and his wife Tammy, visited Lizard Island for a week. Mr Frazer spent time at the Station discussing current projects in marine science on the Barrier Reef with scientists working on Lizard Island. He was given a crash course in SCUBA diving by the Director and later taken for a dive on the outer barrier reef where he experienced the 'real reef'.

CORALS SPAWN IN AQUARIA:

Ms Vicki Harriot, a Ph D student from James Cook University, is studying reproduction in corals on the Barrier Reef. She has been fortunate in having her specimens of Pocillopora corals actually spawn in the aquaria and the larvae settle out on the glass. We consider this a good indication that the aquarium system is providing water and conditions of the utmost quality.

NEW AMINO ACID DISCOVERED:

Dr Roger Summons, of the Australian National University, has discovered another amino acid new to science. The chemical was isolated from the unique prochloron algae living symbiotically with certain compound ascidians that grow in abundance on the reef here. According to Professor Griffiths (James Cook University), these algae are very efficient primary producers, and liberate as much as 40% of the carbon production back to their host ascidians. Increasing scientific attention is being placed on this interesting interaction.

NEW CROWN OF THORNS POPULATION (?)

Mr Warwick Nash, a postgraduate student of James Cook University, has recently discovered a substantial population of Crown of Thorns starfish on the outer edge of the ribbon reefs near Lizard Island. This is the first time populations have been reported from outer barrier reef habitats - they normally occur on inshore reefs. Mr Nash has taken samples of the starfish for electrophoresis analyses of their isozyme patterns to see if they are related to populations on other parts of the Barrier Reef.

DEVELOPMENTS DURING 1980-81:

BOATING: In keeping with our philosophy that access to the reef is our prime objective, another aluminium outboard powered boat has been acquired: a de Havilland River Truck. This brings the Station's fleet to eight. A hydraulic pump/winch assembly has been fabricated by Palm Beach Marine to specifications by the Director and mounts on the 'Trojan' work boat. The pump assembly mounts directly on top of one of the 70HP outboards, and the winch is mounted on an A-frame across the transom. As such,

Dr Leis uses the 'Trojan', which is now a functional 'Mini-trawler' for his ichthyoplankton studies on the Barrier Reef.

A Furuno FE200B depth recorder has also been added to the Trojan.

DIVING: Two small scuba bottles and an underwater diver propulsion vehicle (Farallon Mark VI) is now used to conduct plankton surveys around Lizard Island.

LABORATORY: As a result of recent successes in fund raising activities (see below) significant additions have been made to the laboratory facilities including the following:

- * scintillation counter - an LKB Rack Beta microprocessor controlled liquid scintillation counter. The instrument is capable of limited programming through a remote tele-printer and automatically measures radioactivity in up to 300 samples at a time. Scientists now carry out more detailed studies for example, on organic processes and nutrient cycling, using radioactive tracers. Work can be completed here on the reef where the animals live, rather than collect specimens for shipment to their institution in the 'hope' that their field methods worked.

- * spectrophotometer - a Varian DMS90 double beam spectrophotometer and X-Y plotter has been installed. The instrument automatically scans samples with light beams ranging from 190 to 900nm to detect concentrations of various pigments. It is powerful enough to read through whole cells, as Professor Griffiths and Luong-Van have just discovered in their studies on prochloron.

- * freeze dryer - a Dynavac FD6 12 litre capacity freeze dryer has been installed to preserve samples of reef organisms for later organic chemical and pharmacological studies.

- * Beam balance - a Mettler beam balance reading of 0.05 mg has been kindly donated by CSIRO Fisheries (Cleveland) from surplus stock.

WORKSHOP: Additions of tools and machinery now almost complete requirements to make the workshop fully functional. These include:-

- * Aston 216 TIG welder which is to be used for repairing aluminium boats and fabricating parts and equipment needed by researchers.

- * Demco 1136B bench lathe with 3 foot bed and 9 inch swing. This will be used for fabricating fittings for research equipment, diving gear and repairs to Station's plant and machinery.

- * Drill Press (Waldown)

- * High Pressure diesel injector tester (for testing and setting injectors in the diesel generators, tractor and Land Rover).

DONATIONS:

Funds referred to in the last newsletter have materialised. The most prominent of these is a donation of \$250,000 from the Suntory Company of Japan. The first \$100,000 of this was made to the NSW Premier, Mr Neville Wran, then handed to Sir John Proud, president of the Lizard Island Reef Research Foundation, at a ceremony at the Australian Museum in August 1980. The Suntory Central Research Institute has a strong interest in studying biologically active compounds from the sea and has already had a contingent of scientists visit the Station. The remaining \$150,000 is to be handed over within the next two years. The donation is to be put towards the new work boat, R.V. SUNBIRD (14 meter aluminium catamaran motor sailer - designs of which are now completed and are with the Marine Board of Queensland for Survey Approval), new visitor accommodation, laboratory equipment (eg the freeze dryer mentioned above) and extensions to the laboratory block.

The efforts of Dr Joe Baker, chairman of the Lizard Island Trust, were largely responsible for procuring this support.

Other donations totalling \$53,000 have been received by the Lizard Island Reef Research Foundation from such sources as American Express, Comalco Ltd, C.H.Warman, CRA Ltd, the James N. Kirby Foundation and anonymous donors.

DEVELOPMENT PLANS:

With the recent successes in fund raising and growing demand for upgrading the Station, the Trust has commissioned the development of a Master Plan. Valuable assistance was provided by Ted Dews of James Cook University, David Mountseer of the Commonwealth Housing and Construction Authority in Canberra, and David Hartley, a design consultant in Cairns, and Ed Power, Queensland National Parks and Wildlife Service, Cairns. A final draft of this plan is now being prepared by Mr B.T.Lynn, a Cairns architect, and a preliminary version has met with general approval from the QNPWS (who control our development as we hold a special lease in a National Park).

The Master Plan has considered the accommodation and research requirements needed by visiting scientists, staff and support facilities and has tried to design a community which will harmonise with the natural environment and in which it will be both rewarding and productive to live.

Plans are now completed for four self contained bungalows (which will not be A-frames) to replace existing tents. Tenders for construction of the bungalows are expected to be called within the next month or so.

STAFF:

All staff continued to work well, with no major breakdowns.

MEETINGS:

During the year the Executive of the Lizard Island Trust met four times to discuss the Station's progress and functioning, and plan for developments.

In addition the Australian Museum Trust met on the Island in October, giving Trust members an opportunity to see the Station's operation.

The Director attended the second International Symposium on Biology and Management of Some Tropical Shallow Water Communities, in Port Moresby in July 1980.

OVERSEAS TRIP:

For 6 weeks in June/July 1980, the director and his wife were overseas on a familiarisation tour of marine research stations. Discussions were held with numerous directors, laboratory managers, technicians and marine scientists and much useful information gained about financing and running marine research stations, setting up laboratories, support systems (such as diving compressors, boats, aquariums) and future directions in marine science. The general itinerary included visits to Leigh Marine Station (Auckland, New Zealand); University of Southern California Catalina Island Laboratory (IMCS) Scripps Institute of Oceanography in La Jolla; Marine Ecological Consultants in Southern California; Santa Barbara Marine laboratory; Moss Landing Marine laboratory; University of Santa Cruz Marine laboratory; Steinhart Aquarium and California Academy of Science in San Francisco; University of Hawaii Marine laboratory on Coconut Island; Hawaii Pacific Biomedical Research Centre; Sea Life Park; Waikiki Aquarium; Tatsuo Tanaka Memorial Biological Station on Miyakee Jima, near Tokyo Japan; Seto Marine Science Laboratory (Kyoto University); Sesoko Marine Research Station in Okinawa (University of Ryukyus); University of Guam Marine Laboratory; Marine Science Centre, University of the Philippines; University of San Carlos Marine laboratory on Cebu; ICLARM headquarters in Manila; and finally the University of Papua New Guinea's laboratory on Motupure Island.

CONCLUSIONS:

Lizard Island has tremendous potential for coral reef research and is extremely well placed for logistic support and access to coral reefs. Laboratory facilities however, need considerable expansion to attract and support more analytical studies on reef processes. Special mention is given to Dr Jeff Leis and Patti Schmitt who ably stood in as acting Director and Secretary during the 6 weeks we were overseas.

PUBLICATIONS:

The following 26 papers result from work done wholly or in part at the Lizard Island Research Station. They have appeared since the issue of Newsletter No. 6.

- Bakus, G.J., 1981. Chemical defence mechanisms on the Great Barrier Reef, Australia. Science (Jan. 30), 211: 497-499.
- Benson, A.A. and R.E. Summons, 1981. Arsenic accumulation in Great Barrier Reef Invertebrates. Science (Jan. 30) 211: 482-483.
- Bishop, D.G. and J.R. Kenrick, 1980. Fatty acid composition of symbiotic zooxanthellae in relation to their hosts. Lipids. 15(10): 799-804.

PUBLICATIONS CONT.

- Bishop, D.G. et al., 1980. Mono layer properties of chloroplast Lipids. Biochemica et Biophysica Acta, 602 : 248-259.
- Davies, P. J. et al., 1977. Reef development - Great Barrier Reef. Proc. Third Intl. Coral Reef Symp. Miami, Florida. pp. 331-337.
- Dinesen, Z.D., 1980. Some ecological aspects of coral assemblages in the Great Barrier Reef Province. Ph D Thesis, James Cook Uni. 361 pp.
- Dinesen, Z.D., 1980. A revision of the coral genus Leptoseris (Scleractinia: Fungiina: Agariciidae). Mem. Qld. Mus. 20(1): 181-235.
- Dunn, D.F. and W.M.Hammer, 1980. Amplexidiscus fenestrata n. gen., n.sp. (Cedenterata: Anthozoa), a tropical Indo-Pacific Corallimorphian). Micronesica, 16(1): 29-36.
- Hamner, W.M. and J.H. Carleton, 1979. Copepod swarms: Attributes and role in coral reef ecosystems. Limnol. Oceanogr., 24(1): 1-14.
- Hamner, W.M. and D.F. Dunn, 1980. Tropical Corallimorpharia (Ceolenterata: Anthozoa): Feeding by envelopment. Micronesica, 16: (1): 37-41.
- Harvey, M., P.J.Isdale and D.G.Backshall, 1978. Reefs and Islands of the Great Barrier between 14°S and 17°S. Roneed Report of Great Barrier Reef Marine Park Authority. 12 pp.
- Kinsey, D. W. and P.J.Davies, 1975. Coral reef growth, a model based on morphological and metabolic studies. Aust. J. Mar. Sci. 7, 1975 Reef bioenergetics Symposium.
- Kinsey, D.W. 1977. Seasonality and zonation in coral reef productivity and calcification Proc. Third Intl. Coral Reef Symp. Miami, Florida. pp. 383-388.
- Kinsey, D. W., 1978. Alkalinity changes and coral reef calcification. Limnol. Oceanogr. 23(5): 989-991.
- Kinsey, D.W. 1979. Carbon turnover and accumulation by coral reefs. Ph D thesis, University of Hawaii, 248 pp.
- Kinsey, D.W. and P.J. Davies, 1979. Carbon turnover, calcification and growth in coral reefs. pp:131-162 in: Trudinger P.A. and D.J.Swaine (Eds). Biogeochemical cycling of mineral forming elements (Elsevier).
- Lubbock, R., 1980. Five new basslets of the genus Pseudochromis (Teleostei: Pseudochromidae) from the Indo-Australian Archipelago. Revue Suisse Zool. 87: 821-834
- Robertson, R., 1981. List of shell bearing molluscs observed and collected at Lizard Island, Great Barrier Reef, Australia. Tryonia, 4: 1-32 (Misc. Pub. Dept. Malacol. Acad. Nat. Sci. Phil.)
- Russell, B.C. and R.F. Gressey, 1979. Three new species of Indo-West Pacific Lizard fishes (Synodontidae). Proc. Biol. Soc. Wash., 92 (1):166-175.
- Skyring, G.W. and L.A. Chambers, 1976. Biological Sulphate reduction in carbonate sediments of a coral reef. Aust. J. Mar. Freshwater Res., 27: 595-602.
- Smith, S.V. and D.W.Kinsey, 1976. Calcium carbonate production, coral reef growth and sea level change. Science, 194 (Nov. 26): 937-939.

PUBLICATIONS: CONT

- Summons, R.E., 1981. Occurrence, structure and synthesis of 3 - (N - methylamino) glutaric acid, a new amino acid from Prochloron didemni. Phytochemistry (in press).
- Summons, R.E. and C.B. Osmond, 1981. Nitrogen assimilation in the symbiotic marine algae Gymnodinium microadriaticum: Direct analysis of ¹⁵N incorporation by GC-MS methods. Phytochemistry, (in Press).
- Tranter, D.J. et al., 1981. Nocturnal movements of phototactic zooplankton in Shallow waters. Mar. Biol. 61: 317-326.
- Veron, J.E. and M. Pichon, 1980. Scleractina of Eastern Australia, Part III. Aust. Inst. Mar. Sci. Monog., 4: 411 pp.
- Webb, K.L. and W.J. Wiebe, 1978. The kinetics and possible significance of nitrate uptake by several algal-invertebrate symbioses. Mar. Biol., 47: 21-27

The number of publications received to date now totals 66. (Would authors whose published works are not listed here please send reprints.)

VISITORS:

During the year, some 101 visiting scientists and assistants worked at the Station on the usual diversity of projects. Overseas visitors again constituted roughly one third.

The Table below shows visitor statistics for the year. (The number in brackets indicates the number of visitors who came twice or more).

| | Australian | Overseas |
|-------------------------|------------|----------|
| Scientists & Assistants | 54 (11) | 23 (2) |
| Post Graduate Students | 18 (10) | 6 |
| Spouses | 3 | 4 |
| Children | 3 | 8 |

The average daily occupancy by scientific workers for the year was 6.2; while the average occupancy of all visitors was 7.7. Below is a brief list of the scientists and their projects here at Lizard Island.

■ Australian Postgraduate Students:

Lyle Vail, Macquarie University. Ecology (habitat requirements, distribution, reproduction etc.) of comatulid crinoids - feather stars.

Vicki Harriot, James Cook University. Reproduction (ecology, physiology, settling behaviour and timing mechanisms) in Pocilloporid corals.

Hugh Sweatman, Macquarie University. Studies on population dynamics and ecology of the trigger fish Sufflamen capistratus as an example of a small predatory reef fish.

Gordon Bull, James Cook University. Growth and reproduction in gorgonians (soft corals, sea whips etc.).

Judy Hart, James Cook University. Algal zonation and seasonality around Lizard Island.

Bill Gladstone, Macquarie University. Population dynamics and social structure in the puffer fish Canthigaster valentini, with studies on the role of toxins in predator avoidance.

Brian Lassig, Macquarie University. The role of top level carnivorous fishes in controlling coral reef community structure .

Jan Aldenhoven, Macquarie University. Social behaviour, harem structure and ecological value of hermaphroditism in the angel fish Centropyge bicolor.

Warwick Nash, James Cook University. Population genetics (electrophoreses, isozyme studies) of the crown of thorns starfish, Acanthaster planci.

Jane Hall, Macquarie University. Taxonomy of Myodicopid ostracods (small crustaceans).

Ann Thresher, Sydney University. Populations dynamics of coral reef pipe fishes of the genus Corythoichthys.

Neil Bruce, University of Queensland. Taxonomy of marine isopods (small crustaceans).

Ko Fujiwhara, James Cook University. Studies on the interaction of calcareous algae and scleraetinian corals.

Gordon Anderson, Australian National Parks and Wildlife Service. Recruitment in coral reef fishes - long term monitoring of fish communities on artificial reefs in Lizard Island Lagoon.

Bette Willis, James Cook University. Growth studies on the coral Pavona cactus, effects of grazing and interactions with other corals.

David Klump, Melbourne University. Lipid analyses of coral reef bacteria.

Jan Carey, Macquarie University. The origin and dynamics of beach sediments at Lizard Is.

Sue Meek, James Cook University. Mechanisms of growth in the terminal polyps of Acropora corals - Investigation of the rate of uptake of tritiated thymidine over diurnal cycle in natural light and darkness.

■ International Postgraduate Students.

Peter Wainwright, Duke University. Evolution and structure of the jaw mechanisms in the predatory wrasse Epibulis insidiator.

Elizabeth Gladfelter, University of California, Los Angeles. Skeleton formation in acroporid corals.

Deborah Zmarzly, SCRIPPS Institute of Oceanography, La Jolla. Feeding in crinoids (feather stars)

Marti Ellen-Cowan, Centre for Marine Science, University of the Philippines, (now at Sydney University). Ecology, growth and development in compound ascidians (sea squirts).

Mike Ross and Gregor Hodgeson, Centre for Marine Science, University of the Philippines. Ecology and taxonomy of hermatypic corals.

■ Australian Scientists.

Robin Wass, Sydney University. Ecology and taxonomy of Bryozoans.

Chris Crossland, CSIRO Division of Fisheries & Oceanography, Perth.
A) Further studies on nutrient cycling in coral reef waters, in connection with LIMER II expedition. B) Carbon assimilation/symbiosis in coral eating opisthobranch molluscs and their ingested zooxanthellae.

Terry Frazer and Peter Cooper, Qld. Fisheries Service, Cairns. Tagging mackerel for project by Geof McPherson on the fisheries biology of mackerel in barrier reef waters.

Don Page, CSIRO Division of Fisheries & Oceanography Cronulla. Erection of wind speed and direction recording apparatus on the platform on Carter Reef. (Some very interesting results were taken during the cyclone in March, with wind speeds in excess of 150 Km/hr).

Ian Price, James Cook University. Systematics and biology of marine benthic algae.

Ron Thresher, Sydney University. Reproductive behaviour of coral reef fishes, with special reference to the relation between social structure, harem dominance and male spawning success in protogynous damsel fishes.

Dilwyn Griffiths and Jim Luong-Van, James Cook University. Carbon fixation and primary production of Prochloron from compound ascidians using ¹⁴C tracers and light/dark technique.

Roger Steene, private, Cairns. Photomicrographic studies on coral reef zooplankton (winner of Wild/Leitz photomicrographic competition, in conjunction with the Director).

Margaret Streamer, James Cook University. Survey of the presence of the enzyme arginine decarboxylase in hard corals.

Dave Moriarty, CSIRO Division of Fisheries & Oceanography, Cleveland. A) Biomass and productivity of bacteria in coral reef environments. B) Role of micro-organisms in the food of holothurians.

Basil Johns, Melbourne University. Lipid analyses in bacteria and sediments of coral reefs - Project in collaboration with D. Moriarty.

Howard Silver, Qld. University. Taxonomy of holothuria (sea cucumber, beche-de-mer) and preparation of a field guide to the holothuria of Queensland.

Terry Done, Australian Institute of Marine Science. Time-series studies on coral communities on the barrier reef based on stereophotographic transects.

- Jeff Leis, Australian Museum, Sydney. A) Ecology and taxonomy of Ichthyoplankton (fish eggs and larvae) in coral reef waters around Lizard Island B) Factors affecting the dispersal of coral reef fish larvae: behaviour, development times and ocean current systems. Dr Leis is an associate investigator with the Director on these projects.
- Colin Field, NSW Institute of Technology. A) Studies of the giant marine alga Valonia ventricosa. B) Preliminary survey of mangrove vegetation on Lizard Island.
- Gary Denton, James Cook University. Survey for presence of heavy metals in coral reef biota.
- Ian Poiner, CSIRO Division of Fisheries and Oceanography, Cleveland. Life History strategies and productivity of tropical sea grasses.
- Carla Catterall, University of Queensland. Dynamics of grazing molluscs in sea grass beds (work in conjunction with Ian Poiner's study on sea grass beds).
- Eric Wolanski, Australian Institute of Marine Science.
A) Installation of recording tide gauge at the base of the platform on the outer barrier reef as part of his barrier reef tidal monitoring program. B) Installation of recording current meters around Lizard Island in a joint program with the Director and Dr Leis to study circulation and water mass movements in the northern barrier reef.
- Ian Smith, NSW State Fisheries Laboratory, Port Stevens: Preliminary aquaculture trials at rearing Chlorella and Brachionis for future rearing of coral reef fish larvae (project in collaboration with the Director and Greg Stroud).
- Greg Stroud, Macquarie University. A) Behaviour, development and taxonomy of coral reef fish larvae. B) Ecology of coral reef fish larvae at spawning and settlement based on plankton collections amongst the coral. Mr Stroud is working with the Director on these projects, which are complementary to those of Dr Leis.
- Mike Coats, Griffith University. Determination of background levels of hydrocarbons in Great Barrier Reef organisms and sediments.
- Guy Cox, Sydney University. Ultrastructure of Prochloron algae from the ascidian Didemnum molle.
- Pat Hutchings, Australian Museum. A) Continuing long-term studies on endo-cryptolithic invertebrates (animals which bore into corals), seasonal patterns in recruitment, community progressions etc. B) Taxonomy and ecology of coral reef polychaete worms.
- Ed Frankel, Sydney University. Effects of boring animals in coral - monitoring changes in coral skeletal structure and density with time. This project is in collaboration with that of Pat Hutchings.
- Frank Talbot, Macquarie University. A) Field supervision of Ph D Students working at Lizard Island. B) Fish community structure on natural reef isolates.

■ International Scientists.

Jack Moyer, Tatsuo Tanaka Memorial Laboratory, Tokyo,
 A) The social structure and behaviour of large angelfishes of the genus Holocanthus. B) Study in collaboration with Ron Thresher on reproduction in coral reef fishes (see above).

John Grindley, University of Cape Town, South Africa.
 Vertical migration behaviour of lagoonal plankton, especially the copepods.

Yoko Naya

Kazuo Tachibana

Takaski Kusumi

Masashi Nakagawa, Suntory Institute for Bioorganic Research
 Osaka, Japan. Collection of reef organisms (sponges, soft corals etc.) for chemical extraction for investigations into biologically active compounds.

Bill Gladfelter, West Indies Laboratory, St. Croix, Virgin Is.
 Role of competition in structuring guilds of (non territorial) reef fishes - competitive interactions in squirrel fishes.

Sherman Bleakney, Acadia University, Nova Scotia, Canada.
 Biology of sacoglossan opisthobranchs (habitat requirements, comparative anatomy etc.).

Jim Case, Marine Institute, University of California, Santa Barbara.
 Bioluminescence - identification of local marine and terrestrial bioluminescent organisms and characterisations of their excitation mechanisms.

Joe Bauer,

Salley Bauer, Ohio State University. Reproductive behaviour in angel fishes.

Mike Risk, McMaster University, Ontario (Visiting Fellow at AIMS).
 A) Boring sponges and their effects on corals. B) Sedimentation processes on coral reefs.

Nick Holland, University of California, San Diego (SCRIPPS).
 Studies on feeding and habitat requirements of crinoids (feather stars).

CSIRO Division of Fisheries and Oceanography (Cronulla):
 Two ongoing monitoring programs are being pursued on contract by the Research Station. The first is a fortnightly water sample taken from 0, 10, and 25 metres in the barrier reef lagoon and analysed for oxygen, salinity, temperature and dissolved nutrients (in conjunction with Bob Edwards). The second is a monthly collection of lobster larvae collectors for Dr Bruce Phillips.

Non-Academic Visitors:

Foremost is the visit of the Prime Minister and his wife last June (see above). Other visitors included:-

Sir Geoffrey and Lady Badger, Dr Roy Green and Dr Lang of the Australian Science and Technology Advisory Committee (ASTEC)

who inspected the laboratory facilities and discussed on-going and potential research projects with the acting Director (Dr Leis)

The Australian Museum Trust visited the Station for two days in October.

The Australian Museum Society (party of 10) spent a week here in September.

Zolly Florian, the microscopist from James Cook University, kindly spent a week at the Station in December to service all the microscopes.

Mr Joe Winterton (Head of Marine Parks Section of the Qld Fisheries Service), together with John Hicks and John Cornelius, visited the Station for two days to inspect the reefs and discuss marine park management and zoning strategies with the Director.

Sandy and Gee Reid, of the Lizard Island Reef Research Foundation, visited the island in April to familiarise themselves with the Station's development and future needs.

Mr Phil Gower of Lindbrook International, Brisbane, spent two days at the Station in May to install and test the scintillation counter. Mr Gower said "this was the most remote installation he knew of". He almost had heart failure watching the (\$18,000) instrument being unloaded by block and tackle from the transport vessel 'PETAJ' into one of our little boats, then covered in plastic, driven to the Research Station, dragged up the beach by tractor, then man-handled to the laboratory. But there were no problems and the instrument worked first-off.

Ted Dews (Controller of Buildings, James Cook University), David Mountseer (Dept. Housing and Construction, Canberra), Dave Hartley (Design Consultant, Cairns) and Ed Power (QNPWS, Cairns), were invited to the Station for three days in November and prepared a very worthwhile working paper outlining the Station's development needs and building requirements.

Charlie and Julie O'Neill, consultant surveyors from Cairns, spent two days at Lizard Island at the Director's invitation preparing a properly surveyed ground plan of the Station's lease. Their services, which were donated free, are very much appreciated.

Mr Sid Curtis, Stewart Tait and Ed Power of the Queensland National Parks Service visited the Station in May for two days to examine building sites and discuss our development plans in relation to the constraints of building within a National Park.

Committee members of the Australian Heritage Commission spent a night at the Station in June after examining the Great Barrier Reef.

Ian Wilson (Minister for the Environment) and his wife Mary, accompanied by Graeme Kellsher and Richard Kenchington, both of GBRMPA, visited the Station in May for an inspection of the facilities and discussions with the Director on research needs on the Great Barrier Reef.

And lastly, Mr Justice Ellicot and his wife Colleen spent an afternoon at the Station in June (Mr Ellicot was formerly Minister for the Environment).

The biweekly guided tours of the Station for visitors to the Lizard Island Lodge are also proving extremely popular and are well patronised.

It is again pleasing to be able to report on such a good year. I believe the scientific results from work done at the Station fully justifies our efforts, and would like to express my appreciation to all the staff, visiting scientists, architects and surveyors, acting Directors, members of the Trust, the Lizard Island Reef Research Foundation and the Director and staff of the Australian Museum for all their help and co-operation.

Barry Goldman
Director
June 1981.