

SOUTH PACIFIC DIVERS

MEETINGS: 3rd Monday of each month at the Haberfield Rowing Club, Dobroyd Parade, Haberfield, at 8 pm.

PRESIDENT:	GARY CAMERON	635-5128
SECRETARY:	GARY RYAN	BUS. HRS. 042-292111
TREASURER:	DAVE VICKERS	630-7179
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SAFETY OFFICER:	PETER HARPER	57-4903

CLUB CALENDAR

Sunday 24.10.76	B.B.Q. at TUBBY'S, NO. 4 Wellwyn St, Canley Heights. "BON VOYAGE" to member going overseas on holidays. TIME: 12 noon BYOG and steak (salads provided)
Sunday 31.10.76	Small boat dive (club) Dive site depending on weather 8 am Gunnamatta Bay boat ramp.
	Trawler dive on the wreck of the "MAITLAND" Shallow dive 40 to 50 ft. Leaves Church Point 8 am \$ 6 divers , \$2 passengers. Contact J. Sumner Tel: 50-0268. Bookings in advance for all trawler dives.
Sunday 7.11.76	Trawler dive on the wreck of the "GALAVAH" 170 ft. Leaves Church Point 7 am \$6 divers, \$2 passengers. Contact J. Sumner for bookings.
Sunday 14.11.76	Club dive, small boats and yachts. "STAR OF RUSSIA" wreck. 8 am - lagoon Porta Vila, Hew Hebrides.
	if not able to attend this club dive a second choice is available:
Sat 13.11.76 Sun 14.11.76	Weekend away - Jervis Bay Contact J. Sumner for bookings - 6 vacancies only. 2 days diving - 4 dives- \$30 including accommodation (does not include food)
Monday 15.11.76	CLUB MEETING

Sunday 21.11.76	Trawler dive "DUNBAR" 30 ft Leaves Double Bay 8 am \$6 divers Contact J. Sumner
28.11.76	Club small boat dive SHELLHARBOUR 8 am boat ramp Then on to a BBQ - Gary Ryan's at Farnborough Heights late afternoon. BYOG AND STEAK
Friday Night 3.12.76	* Ten Pin Bowling Night - Bring the family - 8 pm Enfield Bowl, Hume Highway, Enfield.
Sunday 5.12.76	Trawler dive on the wreck of the "BIRCHGROVE PARK" 180 ft Leaves Church Point at 7 am \$6 divers \$2 passengers. <i>Contact J. Sumner</i>
Saturday 11.12.76	SPD CHRISTMAS PARTY 7 pm "HAWAIIIN NIGHT" AT 'THE TAYLORS - BUNDEENA' \$2 per head, includes stk salad and beer.

SPECIAL NOTE: NO CLUB MEETING IN DECEMBER

17.1.76 Monday	CLUB MEETING
Sat & Sun 12th & 13th Feb, 1977	Weekend away at Shoal Bay Details at Jan club meeting.

FEES ARE NOW WELL OVERDUE. THERE ARE ONLY 16 FINANCIAL SPD MEMBERS TO DATE.

Arrangements are being made for a theatre party to Reg Livermore's "WONDER WOMAN".
Details later.

Raffles are commencing once again, 20 cents per ticket, prizes - books on diving or
associated subjects:

Ten SPD members are off on holidays in November to Vila, New Hebrides ----- have a
great time.

The Manly's are holidaying at Lord Howe Island early November.

* It was not possible to book alleys at the Bowl, so a week night may have to be
arranged. Details decided at the club meeting.

KEEP READING -----

SOME REALLY GREAT STORIES OVER THE PAGE

FILM NIGHT ANNOUNCEMENT FROM THE NSW UNDERWATER FEDERATION

RE-SCREENING OF THE FILMS SHOWN AT THE RECENT MAN AND THE SEA CONVENTION.

WEDNESDAY 27TH OCTOBER, 1976

AT 8pm

ST. GEORGE MOTOR BOAT CLUB

ADMISSION \$ 3 (at door)

PROGRAM: TOTAL TIME 150 minutes

"A TRIP INTO BLUE" JACK MCKENNEY

"WINDJAMMER LOST" BCB HOLLIS

"JERVIS BAY THE BLUE EDGE" TOM BYRON

ISLANDS OF TRAGEDY" BEN CROPP

"WRECK OF BATAVIA" CHANNEL 2/9

MONTAGUE ISLANDLONG WEEKEND OCTOBER.....by Andy Hughes

I don't think Friday helped to encourage anybody's thoughts about a good long weekend being on the cards for diving. Although there were a few late withdrawals about 20 managed to arrive at all odd hours of the night and morning. After Friday's weather Saturday was a complete reversal, blue skies, no wind and the bar dead flat. So with only two boats (another two could have been easily filled) those that got a ride were in for a No. 1 dive.

After a very quick trip and anchoring only about 25 ft off the island in front of the seal colony, out of the current running past, you begin to notice a few things. First, the smell of the ocean breezes is overtaken, and I mean overtaken by the sweet smell of seal dung artistically splattered and streaked all over the rocks on the northern tip of the island where the colony is situated. After your stomach has stopped churning and you get your senses back you notice these fellows are very curious both above and below water and seem to enjoy just floating around in groups in some most inconceivable positions, besides leaping out of the water to do somersaults and what-nots.

One diver left his weight belt back at Narooma in his Toyota, another lost his main housing O-ring over the side, but eventually we got in for a dive. The seals beautiful sleek shapes, speed and manoeuvrability show up straight away to the clumsy diver. We swam to the bottom (about 30 ft) and immediately they converge on you with great curiosity and their antics underwater have to be seen first hand. Gary Cameron was able to get some great action shots on the island of the 'Hughes' panicked seals.

Back at the flats tubes were passed around and the days adventures related to the unlucky ones not able to get a boat ride. With the winds strengthening in the arvo things looked bleak for the remaining two days diving, so --- up to the local pub and then the Golf Club etc etc. to drown our sorrows.

Montague Island situated about 4 miles off Narooma supports a colony in the breeding season of about 400 to 500 Australian Fur Seals (*ARCTOCEPHALUS DORIFERUS*) they belong to the Eared Seals and differ from true seals in that they have small pointed external ears and only Eared Seals can turn their hind flippers forward and outward so they may walk on them. One Sea Lion in SA was found after a marathon walk 6 miles inland.

The breeding season extends between October to the end of January and new born pups can be expected to be seen usually towards the end of November. This is followed by mating then around January the fulls disappear leaving the island to the nursing females and pups. During this period the young pups grow very rapidly from a rich milk suckled from the cows. For adult seals their normal diet consists of school fish, such as salmon, squid etc and also crayfish. Females grow to around 6 ft in length while the males grown to 8 ft and can weight up to 600 pounds.

A special thanks to Gary Cameron and Bob Smith who dragged their boats a long way.

Andy

THE SOLITARY ISLANDSA CASE FOR CONSERVATION

COMPILED BY GARY RYAN FROM A RECENT ARTICLE BY DR. T. DONE OF TOWNSVILLE UNIVERSITY.

In his log of Monday, 14th May, 1770, Lieutenant James Cook noted "some small rocky islands between us and the land, the southernmost of which lies in latitude $30^{\circ}10'$, and in the northernmost in $29^{\circ}58'$, and somewhat more than two leagues from the land". When Cook named these, "The Solitary Islands", he was unaware that, beneath the waters surrounding them, lay a marine community of extreme interest and beauty. It is the purpose of this article to describe these communities, point out their unique potential as areas for scientific research and recreation, and highlight some threats to their existence. Finally, a call is made for their sensible management in the framework of marine National Parks.

The Communities

Lying near Coffs Harbour, almost 1000 km south of the recognised southern limit of the Great Barrier Reef, the rocky subtidal slopes of these six, grassy topped islands support a surprising assemblage of marine organisms. As may be expected, this assemblage contains many of the species which characterize much of the rocky shoreline of central and northern N.S.W. However, to the delight of all who have been privileged to view them, these island shores are in many places completely dominated by coral reef species from most of the major phyla.

This scientifically unique mixture of north and south is set in what is generally accepted as some of Australia's most spectacular diving territory. Rocky cliffs plunge vertically down to 20 metres; nearby, the rocky bottom shelves down more gently to the sand below. Here and there, rocky outcrops are dissected by spectacular chasms, just a metre or two wide, and many metres deep, their walls totally covered in marine growth of incredible diversity.

Every rocky surface has some form of life growing on it — algae, sea squirts, sponges, hydroids, gorgonians and soft corals — all are abundant. And hard corals, often of such size and covering such a large area, make it difficult for you to believe that this is not the Great Barrier Reef, but that you are still in N.S.W.

Benthos

The benthic (bottom-living) communities have been surveyed by a number of biologists from the University of New England, Armidale.

A study of the hard corals revealed that at least 33 species from 19 genera are present — 30 of these are also found on the Great Barrier Reef. The hard corals are in many areas the most conspicuous benthic organisms, with colonies up to several metres across covering virtually 100 per cent of the bottom for large areas.

The other conspicuous benthic organisms are predominantly soft corals, sponges, ascidians (sea squirts), bryozoans ("lace corals") and algae. Preliminary analysis of a survey made in 1975 indicates that the numbers of soft corals species is of the same order as that of the hard corals, another important finding for a community this far south of recognised "coral country". All major soft coral families are present, from the highly branched gorgonia, to platelike, encrusting and dendritic forms. Twenty-two species of ascidians, both solitary and colonial have been recorded, whilst the sponges, algae and bryozoa, all extremely diverse and abundant, have yet to be systematically recorded.

Free Living Invertebrates

These sessile benthic organisms provide the habitat for a variety of crustaceans, echinoderms, molluscs, and worms which represent both tropical and temperate realms. Spectacular examples of tropical species to be found are the dainty banded coral shrimps, many coloured feather stars, the long spined sea urchin, the egg cowry and other cowries and the magnificent "Spanish dancer" nudibranch. Two species of sabellid tubeworms, their beautiful tentacles making them look more flowerlike than wormlike, are very common amongst the corals. The presence of so many species which are principally tropical in their distribution is of considerable interest to marine biologists.

Fish

The fish fauna also consists of an interesting mixture of tropical and temperate. Side by side with the southern species, including red rock cod, morwong, snapper, blackfish, etc., are frequent coral reef species. They include the Moorish idol, the pennant coral-fish, the lion fish and other Scorpionidae, triggerfish, trumpet-fish, several coralfish of the Chaetodon family, clowns, surgeons ... and spinefoot fish. Even the cleaner fish and two mimic species maintain populations, the real cleaner by picking parasites off other fish, the mimics by taking a nip off other fish. Occasionally seen residents of these waters are the mighty plankton-eating manta ray, and the green sea turtle.

Why Conservation? — Scenery and Science

To the diver naturalist who sees them, there is no question that, in the marine communities of the Solitary Islands, exist something which is extremely valuable.

reason that some of the great terrestrial national parks exist primarily for their scenic beauty, so should many suitable parts of the sea be protected.

But scenic attributes are only part of what the Solitaries offer. Of even more far-reaching importance in some ways is the potential that the communities offer to marine scientists in the understanding of general problems of coral-reef ecology. The description presented above is on the basis of a relatively small amount of observation by a few marine biologists. What we saw is enough to pose dozens of relevant questions. For example: What are the differences between the islands and the nearby headlands which result in the former supporting a largely tropical fauna, the latter a temperate one?

The answer to this question is likely to be complex, with both hydrological and biological components. And, as in all science, the investigation of such questions will create other, more specific questions. Questions relating to the physiological tolerance of tropical species in southern waters; the interactions between species — tropical with temperate; the dispersive powers of organisms; how did the tropical species get here initially; do they depend on frequent immigration from the Great Barrier Reef, or are they self-perpetuating populations? If so, to what extent is speciation of the isolated tropical populations occurring? Do the reproductive and nutritional processes differ in these waters, which have an annual temperature regime markedly different to that of their usual habitats? And so on . . . These questions, and many others, can be asked of all the tropical species present. It is important to note that many of the above questions are relevant not only to the Solitary Islands, but to coral reefs in general. *However, it is obvious that the answers to many of the questions depend on the isolation of the Solitaries from the Great Barrier Reef, and the occurrence of the communities in waters which are very different to those inhabited by most coral communities. These communities are unique, and should be respected as such.*

Threats to the Communities

The undoubted value of the Solitary Islands is threatened by increasing exploitation. Those very species which make them such a delight are, unfortunately, the object of attention of those who would like to take their own bit home. I refer to the collectors and the fishermen. Collectors of corals, shells, and tropical fish for aquariums are all frequent visitors to the Solitaries.

Their activities are a real threat to the existence of several species, especially the more exotic fish species. Although individuals deny that what little they collect will do any harm, at the Solitaries this is simply not true. The local population of the several species of clown fish are very small, yet these fish are an easy target for anyone who cares to take them. The range of suitable habitats is very restricted, and it is no exaggeration to say that the entire clown fish populations could be wiped out by a selfish collector. Perhaps even more to the point, the accumulated effect of individual conservation-minded collectors who take only one or two each, could very easily have the same effect. The truth of these statements is borne out by the experience at Julien Rocks, Byron Bay. Here, as a result of the activities of fish collectors, only the giant anemones are left to remind us that a clown fish population, once abundant, ever existed.

The story of the clown fish applies in varying degrees to all the species of the Solitaries, particularly the fish and the molluscs. The populations are small and isolated. While the effect of one or two collectors may be negligible, the accumulated effect of many could entirely change the nature of the marine community.

Fishing and the World Spearfishing Championships

For many years the reefs around the Solitaries have provided a living for a number of professional fishermen, and pleasure for countless amateur line and spearfishermen. A certain amount of such exploitation can be absorbed in the sense that the nature of the whole community may not significantly be changed.

However, there looms in the near future an event which, could pose a real threat to the biological communities. I refer to the 1977 World Spearfish Championships proposed for the Solitary Islands. I am not opposed to an individual "spearing a fish for a feed" (I do it myself). But the impact of a large group of the world's fittest, finest spearfishermen at these small islands will be devastating. The winning spearfisherman is the one who spears the greatest weight of the greatest variety of fish, with an upper limit of the number of each species taken, a lower limit on the weight, and some species being banned. There will be individual and team events.

The fish on the score sheet include both pelagic and reef-dwelling species. Heavy spearing of the pelagic species is unlikely to affect the reef community significantly, since the pelagics are transitory and, it is unlikely that a significant proportion of their population could be killed during the competition. However, the killing of large numbers of fish which are permanent residents in the coral areas may have drastic consequences on the rest of the community. These fish form an integral part of the community and are linked to it and to each other by a complex system of food chains. To remove a significant proportion of the resident fish populations

will therefore have consequences at many other levels of the community. It is impossible to predict what the consequences may be.

Proponents of the competition argue that they will not spear a significant proportion of the resident fish population. Even if they were correct, it is true that in holding their competition they will make the Solitaries the mecca of N.S.W.'s "spearos" — at least until the fish become so scarce that the place gets a name as being "speared out". People will come to the Solitaries to remove fish; eventually ecological balances will be upset.

Wouldn't it be better if the Solitaries were exploited in a way which is not destructive? With a little effort, they would become another important attraction for the Coffs Harbour area

visits by diving naturalists would not affect ecological balances — they take nothing except photos and memories of a beautiful dive.

The communities would retain the structural and functional attribute which make them scientifically unique in the world.

The Solitaries are currently being considered as the site for a Marine National Park. Details of the degree of protection and the boundaries are still under consideration. It is hoped that the proposal will receive the support of the local population, and that before they encourage the spearfishing championship, they consider what the communities are, and alternate ways of managing them.

Anyone who feels concerned about the future of the Solitary Islands is urged to contact the Solitary Island Marine Conservation Association, P.O. Box 56, Coffs Harbour, N.S.W. 2450.