



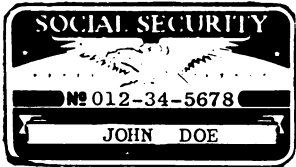
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LETTER FROM SYDNEY

Barrier reef in danger

The Great Barrier Reef, one of the natural wonders of the world, extends from near the mouth of the Fly River in New Guinea down the coast of Queensland, Australia, to Breaksea Spit, a distance of some 1,250 miles. Now the reef faces danger of encroachment, both from marine creatures and from human beings.

Crown-of-thorns starfish have already destroyed large areas of coral near Green Island, and threaten wider devastation. The destruction was first observed three years ago, but scientists have been puzzled about its origin. The popular theory has been that tourists collecting trito shells, a natural enemy of the crown-of-thorns, allowed the starfish to proliferate.

Naturalist Noel Monkman, however, has recently attacked this theory. He believes that the starfish's main natural predators are the sardine and another small fish called the hardyhead. These fish, he says, were driven away from Green Island six years ago by pile driving operations for a new jetty, and the starfish have been on the rise ever since. Fishermen have compounded the problem by netting the fish for bait.

Monkman says that Fisheries Department and university scientists have ignored both his theory and his urgent plea for nets to be banned at least until the idea can be proved or disproved.

The crown-of-thorns, however, is not the only problem facing the reef. In 1967 a citizen of Cairns, North Queensland, D. S. Forbes, applied for an 84-acre lease to mine limestone for agricultural purposes on Ellison Reef, part of the Barrier 30 miles east of Innisfail. Because of considerable interest in mining the reef, his application was regarded as a test case.

No sooner was his request received, than 15 organizations and individuals lodged formal objections, and 11 others protested by letter or telegram.

Forbes said that he intended to supply coastal sugar cane farmers with fertilizer mined from dead coral, which would require mining at least 2,000 tons a year for a commercially successful operation. He expected to sell the lime at about 12 percent below current prices.

Opposition has been both widespread and vocal. The director of the Australian Conservation Foundation, Dr. D. F. McMichael, says that no mining should be allowed on the reef until a qualified investigation has been made of all its resources. "It has a diversity

of organisms," he says, "greater than anywhere else in the world. Many of these are unique to the Barrier Reef."

Dr. McMichael, who first examined Ellison Reef in 1965, returned there again to study it further when he heard of the proposed lease.

"I do not believe," he says, "that the coral sand deposited on the reef could be mined in the manner described without causing serious damage to the life there."

That the reef is teeming with life is hardly in doubt. In a brief five-day survey of Ellison Reef alone, three members of the Queensland Littoral Society catalogued 88 species of live coral, 190 species of fish and 60 species of mollusks. At least 40 species of fish were observed feeding on plant matter in the coral sand and on the very fine fur-like covering of algae on the coral rubble. The total effect of the mining would thus probably be far greater than merely killing the coral, says the Society's president, E. F. Hegerl. Direct interference, he claims, would disrupt the food supply of the fish and other creatures in the ecological chain, and the reef would probably undergo dramatic changes.

Another danger, according to Dr. J. H. Barnes, of Cairns, is the possibility of a dangerous and widespread outbreak of ciguatera, an illness in man caused by eating poisonous fish flesh. Such a toxin could be produced as an effect of the mining operations, Dr. Barnes believes.

In the hearing on the lease request, the attorney representing the objectors, R. L. Arnell, likened the mining of the Barrier Reef for limestone to bulldozing the pyramids or the Taj Mahal for road-making material.

Finally Mining Warden J. W. Ashfield recommended that the application be turned down on the grounds of public interest, taking into account, he said, the expert evidence of witnesses for the objectors. The recommendation has been sent to the Queensland Minister for Mines for a final decision; he is not obliged to accept it.

But the conservationists and the miners continue their wary state. "I suggest," says J. H. Busst, president of the Innisfail branch of the Wild Life Preservation Society, perhaps planning for the future, "that an excellent scientific case could be prepared against any mining operations—whether for minerals or oil—in any area of the Barrier Reef."

W. A. Scholes