

Cooperative fishing interactions between Aboriginal Australians and dolphins in eastern Australia

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Abstract

Published eyewitness accounts and stories from Aboriginal Australians are used to provide an overview of the geographical extent and characteristics of cooperative fishing between Aboriginal Australians and dolphins in eastern Australia. These sources indicate that cooperative fishing was geographically widespread in eastern Australia, involved both bottlenose dolphins and orcas, and had a significance (emotional and spiritual) to Aboriginal people beyond the acquisition of food. These fishing interactions represent both context and precedent for the economic and emotional objectives of contemporary human–dolphin interactions such as dolphin provisioning. © 2002 International Society for Anthrozoology

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In addition to food obtained by natural hunting, dolphins obtain food by associating with humans in several different ways, ranging from dolphin provisioning, widely known from Monkey Mia in Western Australia, through dolphins accessing food resources from fisheries bycatch, to active cooperation by both humans and dolphins in acquiring the catch and sharing of the proceeds. Habituation and hand feeding of wild bottlenose dolphins (*Tursiops truncatus*) at Monkey Mia has occurred since the 1950s (Connor and Smolker 1985; Ross and Cockroft 1990). Numerous problems, such as high infant mortality, low juvenile (post-weaning) survival and behavioral changes, have resulted from this program

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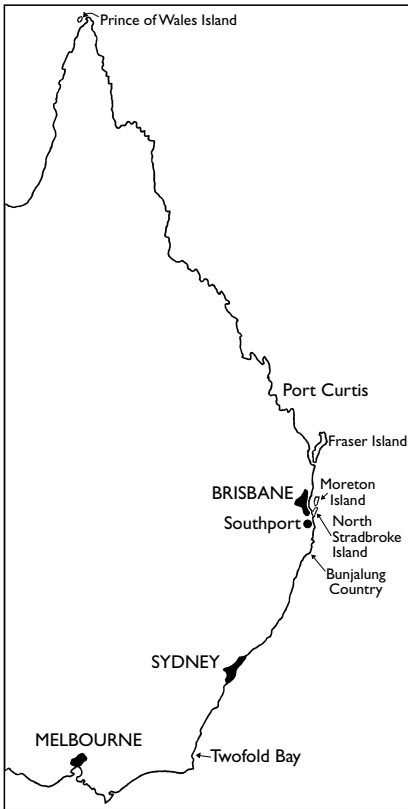


Figure 1. Eastern Australia, showing locations referred to in the text.

(Connor, Smolker and Richards 1992; Wilson 1994). In eastern Australia, bottlenose dolphins are provisioned at Tangalooma, Moreton Island (Orams 1995; 1997; Neil and Brieze 1998) (Figure 1). Indo-Pacific humpback dolphins (*Sousa chinensis*) are provisioned at Tin Can Bay despite the absence of a permit or satisfactory management (Garbett and Garbett 1995a, b). In these cases, the food is deliberately provided by the humans, largely for economic benefit for the organizers and a complex of emotional outcomes for participants, and the dolphins play no role in obtaining that food.

Fisheries bycatch utilization by dolphins has been reported from several locations throughout the world, including North America (Leatherwood 1975; Fertl 1994), northern Australia (Hill and

Wassenberg 1990) and South Australia (Allen 1996). Bycatch utilization is commonly observed in Moreton Bay and has been investigated by Corkeron, Bryden and Hedstrom (1990) and Corkeron (1997). Bycatch may be a significant food resource for dolphins, particularly in areas where overfishing has reduced food availability (e.g. Corkeron 1997) but may also have disbenefits such as an increased incidence of injuries inflicted by sharks. In bycatch utilization, humans provide the food inadvertently and incidental to economic activities and the dolphins frequently must compete (e.g. with sharks) for the food resource.

Cooperative fishing, in which both dolphins and humans participate in the catch and then share the food obtained, have been reported from several locations throughout the world, including west Africa (Busnel 1973), the Mediterranean (several sources cited in Busnel 1973), Brazil (Lamb 1954; Pryor et al. 1990) India (Lockley 1979) and eastern Australia (sources cited below). In these cases, both humans and dolphins obtain an “economic” benefit.

Aboriginal Australians' stories of cetaceans appear to fall into two broad categories: first, "Dreamtime" myth and legend and, second, stories apparently with an essentially factual and historical theme, perhaps with a mythological element included. Examples of the former include the story, from the central west of New South Wales, of how the land creatures tricked the mean and selfish whale in order to use his big canoe in order to make the journey from the fauna-rich land to the north to the fauna-depauperate south-land (i.e. Australia; Ellis 1994). From Groote Eylandt, Northern Territory, comes the story of the female dolphin, which beached herself in pursuit of her dolphin husband who had turned into a human after being killed by a tiger shark. In doing so, she also took human form, thus becoming the first wife (Allen 1976). Examples of the latter type (i.e. with an essentially factual and historical theme, perhaps with a mythological element) are included in the discussion below. On terminology, it should be noted that, although most of the sources cited below refer to porpoises, in all cases it is dolphins that are described. In eastern Australia, dolphins were commonly referred to as porpoises until at least the 1970s, and eastern Australia lies outside the normal range of porpoise species (Corkeron 1988). Dolphins (family Delphinidae) have probably been taxonomically distinct from porpoises (family Phocoenidae) for about 11 million years (Fordyce 1988). The dolphins referred to in the interactions described below are most likely to have been bottlenose dolphins (*Tursiops truncatus*; *Tursiops aduncus*) in all cases except the Orca examples, which are specifically identified.

Fishing cooperatives between indigenous Australians and dolphins occurred in eastern Australia, although it has been suggested that they were restricted to the Amity Point area on North Stradbroke Island (Hall 1984). Published sources suggest that these fishing cooperatives were geographically more widespread.

The purpose of this paper, the sources for which include published eyewitness accounts and the published stories of Aboriginal Australians, is to outline the characteristics and geographic extent of cooperative fishing. In doing so, it also provides a partial context for concerns about the outcomes of associations between humans and cetaceans, particularly dolphin provisioning / feeding (e.g. Capaldo 1989; Iannuzzi and Rowan 1991; Frohoff and Packard 1995; van Tiggelen 1995). The US National Marine Fisheries Service has highlighted a range of potential negative impacts of feeding marine mammals. It can:

“...affect their ability to cope and live in their natural habitat. People have been trying to feed marine mammals such things as beer, junk food or non-edible foreign objects.

...reduce the animal's natural wariness of humans and increased interactions with people can lead to injury or death to the animals. Gunshot wounds are a common cause of death in seals and sea lions on the west coast and dolphins have been shot in the Gulf of Mexico.

...encourage them to approach boats and increase their chances of colliding with boats. They become more apt to tangle with fishing gear or boat propellers. After dolphin feeding programs became popular along the Gulf and southern Atlantic coasts, scientists found more stranded dolphins with wounds and scars from boat propellers. More dolphins also began approaching boats and begging for handouts. Marine mammals have been hit by boat propellers, snagged by fish hooks and chased down by high-powered motor boats. Pups or calves, too young to feed themselves, die when they are separated from their mothers.

...cause migratory animals to remain in areas after their natural prey species have left and the animals could be subjected to food shortages and inhospitable conditions. In Hawaii an increase in vessel traffic may have displaced humpback whales from their traditional nursery areas where they are most protected from predators.

...[cause them to]...become aggressive in their efforts to get food and...[they]...can injure swimmers” (National Marine Fisheries Service 2001).

Geographic extent and characteristics of cooperative fishing in eastern Australia

Geographic extent

Referring to the Amity Point observations, Fairholme (1856a) reported that although “porpoises abound in the Bay [i.e. Moreton Bay],...*in no other part* do the natives fish with their assistance.” Similarly, Hall (1984) suggested that cooperative fishing was confined to this area, citing three lines of evidence. Firstly, “This...[cooperative fishing]...practice is only reported for Stradbroke and Moreton Islands. Secondly, “Flinders (1814, p. 10) noted that Fraser Islanders had no qualms about eating dolphin flesh.” Thirdly, “Further to the north...[of Fraser Island]...he...[Flinders]...found the remains of Aboriginal camps on the beach which included the bones of porpoise” (sic) (Flinders 1814, p. 30). Norris and Dohl (1980), citing Fairholme (1856a), have also asserted this interaction's geographic restriction to Amity Point.

In response to Hall's first point, Alexander (1971) suggested that Aboriginal fishermen on Fraser Island were “sometimes aided by the

species of dolphin that cruised offshore and, almost in collusion with the fishermen, seemed to herd the fish towards them.” Alexander’s (1971) sources are unstated. Curtis (1838) reported that “a species of white porpoise frequent these shores, which the natives almost deify, and it would be death were any of their captives...[i.e. the survivors of the wreck of the *Stirling Castle*]...to kill or injure one of them; it being their notion that as these animals lie near the margin of the bay, they frighten the fish toward the beach.”

Similarly, to the south of the area of dolphin–human interactions reviewed by Hall (1984), Gresty (1947) relates the legend of Gowonda, a “culture hero of the Nerang Valley people.” This legend supports the notion that cooperative fishing extended beyond the Amity Point — southern Moreton Island area. The legend, the source of which is not given, is as follows (Gresty 1947): “[When Gowonda died]...there was great grief and sorrow among the people of the Valley that Gowonda was with them no more. One day some children were playing on the sandy beach between the Nerang River and the ocean — the place we now know as Southport Main Beach — when one of them cried out: “Look! There is Gowonda in the waves!”...Men, women, and children all came running out to the beach and there was Gowonda swimming close in to the shore. They could see him quite clearly, and could recognise him by his white fin...[Gowonda had white hair]... although in the Dreamtime he had been changed into a porpoise. They could see him teaching the other porpoises to drive the fish into the beach so that his people could net them.”

Turnbull (narrated in Robinson 1965) describes a fishing cooperative which had occurred between the Bunjalung people and dolphins on the New South Wales north coast: “In the winter-time, the tribes all along this coast used to camp in the hills and caves in the mountains where there was plenty of tucker [food], wallaby, porcupine [echidna], possum and all that. Summer-time, they’d make down to the beaches for a feed of fish. They’d change their food. That’s when they’d get the porpoises to help them.”

It should be noted that in none of these accounts is the cetacean species clearly identified. In fact, the term “porpoise” is always used. It seems likely, however, that the species involved in each of these accounts is the bottlenose dolphin (*T. truncatus*).

In response to Hall’s second point, Flinders (1814) makes it clear that the dolphin which the Aboriginals ate was provided for them by his crew; “...they were feasted upon the blubber of two porpoises, which had been brought on shore purposely for them.” Bryden (1978) states that “the only evidence I have been able to find of Aborigines eating cetacean meat was

in Alexander (1971): “Sometimes a stranded whale would feed a tribe for a week” (p. 57), but of course this is completely different from actively killing whales for food. However, Moore (1979) reports that although “neither shark nor dolphin were eaten by the Kaurareg [Prince of Wales Islanders, Torres Strait],...the mainland Aborigines enjoyed both of them.” Note that this observation relates to northern Cape York, not to southeast Queensland or northern New South Wales.

Hall’s (1984) third point, the suggestion of “Aboriginal camps on the beach which included the bones of porpoise,” also seems to overstate the case as Flinders (1814) actually states that, at Keppel Bay, well to the north of Fraser Island, “about their fireplaces were usually scattered the shells of large crabs, the bones of turtle, and the remains of a parsnip-like root, apparently of a fern; and *once* the bones of a porpoise were found” (my emphasis). Note that it is at one site only, not sites, and that the presence of cetacean bones does not necessarily imply killing cetaceans for food.

A further example of Aboriginal Australian involvement in a fishing cooperative with dolphins involves cooperative whaling, described from the Aboriginal perspective by Mumbulla (in Robinson 1976, 1989) and from the Caucasian perspective by Dakin (1938) and Mead (1961). In this example, orcas (*Orcinus orca*) would alert whalers to the presence of whales (migrating humpback whales *Megaptera novaeangliae*), lead them to the whales and harass the whales to hasten their death. In the Mumbulla account, the association is entirely with Aboriginal people, the orcas “...would only tell the dark people. The white people had to go an’ look for whales themselves.” In Mead’s (1961) account, Aboriginal people are acknowledged as participants, but not exclusively so.

These reports from Fraser Island, the Gold Coast and northern New South Wales, and the reassessment of Flinders’ (1814) observations, suggest that Aboriginal human–dolphin fishing cooperatives are not unique to Moreton and Stradbroke Islands and were probably quite widespread in eastern Australia.

General characteristics

Eyewitness accounts of cooperative hunting between bottlenose dolphins and Aborigines living on offshore islands in Moreton Bay were given by several writers in the nineteenth century (e.g. Backhouse 1843; MacGillivray 1852; Campbell 1875; Fairholme 1856a; Russell 1888, reviewed in Hall 1984; Petrie 1904). These accounts relate to fishing for mullet (*Mugil cephalus*) and tailor (*Pomatomus saltatrix*) in shallow waters on North Stradbroke Island north of Dunwich (Hall 1984) and on the coast

of Moreton Island (Petrie 1904). The interaction at Amity Point occurred as follows (Fairholme 1856a): "...On seeing a shoal...[of mullet]...several of the men run down, and with their spears make a peculiar splashing in the water...they...[the dolphins]...at once come in towards the shore, driving the mullet before them. As they near the edge, a number of the blacks with spears and hand-nets...dash into the water. The porpoises being outside the shoal, numbers of fish are secured before they can break away...So fearless are...[the dolphins]...that they will take a fish from the end of a spear when held to them..." Tailor fishing on Moreton Island was assisted by dolphins "...driving the fish towards land. When they came near the blacks would run out into the surf, and with their spears would job down here and there at the fish, often getting two on one spear, they were so plentiful...The porpoises would actually be swimming in and out amongst all this, apparently quite unafraid of the darkies. Indeed, they seemed all to be on quite good terms, and I have more than once seen a blackfellow hold out a fish on a spear to a porpoise, and the creature take and eat it" (Petrie 1904).

A quite similar general pattern of interaction is reported by Turnbull (Robinson 1965) in the fishing cooperative between Bunjalung people and the dolphins: "When the season of the sea-mullet was in, the old people would go down to the river and beat their spears on the water. The school of porpoises would come and chase the schools of sea-mullet right into the shallow water, ankle deep, where the old people used to get just enough for two or three meals without wasting any." In addition, "the old people used to make a little net out of kurrajong bark. They'd go down to the beach and beat the water. They'd call on the porpoises. All the porpoises would come and chase the fish into the bay. Then the old people would shoot the net around the fish and catch them."

The stories of cooperative whaling at Twofold Bay were investigated by Dakin (1938), who interviewed whalers who were participants and lighthouse keepers who watched the interaction through telescopes. Dakin was professor of zoology at University of Western Australia (1913–20), Liverpool (1920–21) and Sydney (1929–48) and specialized in marine biology (Bygott and Cable 1981) and was at pains to point out that the essential elements of the description of this interaction were in agreement between people interviewed separately, sometimes >400 km apart. These accounts were corroborated by the diary entries, describing the cooperative whaling, of Oswald Brierly (1843, cited in Dakin 1938) who trained as a marine painter and naval architect in London, managed the whaling operation at Twofold Bay from 1842 to 1848 and was appointed magistrate there (Smith and Bassett 1969), perhaps an observant, knowledgeable and reliable witness.

The account given to Dakin of the role of the orcas in catching whales at Twofold Bay is remarkably similar to a more recent eye-witness account of a group of orcas hunting a Brydes whale in the Gulf of California (reported in Connor and Peterson 1994). At Twofold Bay "...four of the killers separate from the rest, and whilst two of them station themselves underneath the head of the whale, so preventing her from sounding, the others swim side by side, from time to time throwing themselves out of the water on top of her and right across her blowhole. They are speedily thrown off again but the action is continued as if the killers were well aware that by so doing they hindered the breathing of the whale" (Dakin 1938). In the Gulf of California "...four killers surrounded the baleen whale's head...two killers bit the Bryde's whale on its right flank while one swam on its back...Every time the Bryde's whale surfaced, the killers appeared abreast of its head, swimming directly in front of the whale...the killers attack was coordinated and left little doubt what the outcome would be. The killers continued to swim on the larger whales head and back, which seemed to impair the Bryde's whale's breathing...About an hour after the attack began the Bryde's whale was having difficulty swimming...The water began to fill with blood" (Connor and Peterson 1994).

According to Mumbulla (Robinson 1976, 1989), cooperative whaling at Twofold Bay commenced when "...a killer whale came up to where they was cuttin' up [a whale]. He jumped straight up out of the water and splashed his tail on the water. [After the whale was killed]...they towin' him in now, the killers swimmin' alongside playin' with the whale, rubbin' alongside of him...they come into the whalin' station now...They chuck a big lump of blubber to the killer...the dark people would never go out lookin' for whales. Them killers would let 'em know if there was whales about." Having found a whale/s, some of the orcas would stay with it while others returned to Twofold Bay to alert the whalers. They would then guide the whaleboat back to the whale where they would aid the hunt by harassing the whale, getting underneath it to keep the whale at the surface and throwing themselves over the nostrils to disrupt its breathing. If, after harpooning, the whale towed the whaleboat, the orcas would continue to harass it, keeping it at the surface and slowing it down (Mead 1961). Both Mumbulla and Mead refer to the orcas alerting the whalers to the presence of whales during the night. The whalers would follow the orcas to the whale, guided by the phosphorescence in the wake of the orcas. After the whales' death, the whalers would attach marker buoys and anchors to it and leave it for a day or two. During this time, the orcas would take the carcass to the seafloor and eat the lips and tongue. Subsequently, the bloated car-

cass would float back to the surface and be towed to the whaling station. On some occasions, orcas also drove whales into the shallows where they beached (Mead 1961).

Although there are many similarities between the accounts of fishing cooperatives, there is also some diversity worth noting. There are two cetacean species involved and several prey species (both fish and whales). Fishing methods include both net and spear. Interestingly, *Homo sapiens* was not the only species involved in cooperative fishing with the dolphins. Watkins (1891) reported that “I have seen a flock of pelicans and a school of porpoises join forces and fish together in a similar way.” Similarly, Fink (1959) reported cooperative fishing between harbor porpoises and California sea lions in Monterey Bay.

The methods of communication also vary. At Amity Point the dolphins were called by the men making a “...peculiar splashing in the water...” with their spears (Fairholme 1856a). Similarly, the Bunjalung would “beat their spears on the water” (Turnbull in Robinson 1965). On Moreton Island this mode was used as well as “...jobbing with their spears into the sand under the water, making a queer noise...” (Petrie 1904). Busnel (1973) points out that the splashing by the fisherman in Mauritania, in order to call the dolphins, is a deliberate attempt to imitate the sound of mullet splashing back into the water after jumping. Orcas, on the other hand, summoned the whalers at Twofold Bay mainly by splashing and leaping from the water (Mead 1961; Mumbulla in Robinson 1976).

The dolphin–human fishing cooperatives described from eastern Australia are generally consistent with those reported from locations elsewhere, summarized by Pryor et al. (1990) as follows: “Men on shore observe mullet travelling along the coast, too far out to reach from land. Then, if bottlenose dolphins happen to be passing simultaneously, the men shout, whistle or slap the water to attract the dolphins. If the dolphins then move inshore, the mullet are trapped against the beach, and a great melee follows, with men scooping or spearing mullet in the shallows and fish and dolphins leaping in every direction. In the Brazilian coastal cooperative fishery, fishing is initiated and controlled by the dolphins.” The orca example from Twofold Bay is similar to this in that the orcas are not “called” by the whalers but they alert the whalers to the presence of the whales (Mead 1961).

It seems that bottlenose dolphins are the norm in fishing cooperatives, although other species are reported, including the Atlantic humpback dolphin (*Sousa teuszii*) in west Africa (Busnel 1973), and river dolphins. Lamb’s (1954) account involves cooperation between a particular fisherman and a specific boto (Amazon river dolphin, *Inia geoffrensis*) and

Irrawaddy dolphins were believed to drive fish into nets (Anderson 1878, cited in Busnel 1973) in Burma. Similarly, although mullet (of more than one species) is the most commonly reported fish prey in these cooperatives, other species are involved, e.g. the tailor (*P. saltatrix*) in eastern Australia, Brazilian croaker (*Micropogonias furnieri*) and black drum (*Pogonias chromis*) in Brazil, and unnamed species in the Tapajos River in Amazonia (Lamb 1954). The strong association between mullet and bottlenose dolphins in fishing cooperatives with humans is consistent with the overlap in distribution of both species in nearshore, tropical and subtropical waters and the schooling behavior of migrating mullet. The fishing cooperative probably also represents an efficient way for the dolphins to obtain fish, given the effort normally required to do so (see discussion in Pryor et al. 1990), particularly given that, at Amity Point for example, "...an unsuccessful porpoise would swim backward and forwards along the beach, until a friend from the shore waded out with a fish for him on the end of a spear" (Watkins 1891).

Deeper significance

The published accounts from eastern Australia also indicate that the human–dolphin relationship had a deeper significance for the human participants than simply the economic returns of cooperative fishing. For example, on Moreton Island "one old porpoise was well known and spoken of fondly. He had a...stick of some sort stuck in his back...and by this he was recognised...I have seen this creature take a fish from a spear, and the white men working on the island told me they often saw him knocking about with the blacks. At all times porpoise would be spoken of with affection by these blacks...who said they never failed when called to drive in fish to them" (Petrie 1904). A similar relationship is reported from Amity Point, with "one old fellow,...[identified by]...a large patch of barnacles or some fungus on his head,...as tame — with those blacks — as a pussy cat,...[with]...a name which they believed he knew and answered to" (Russell 1888). "The blacks will even pretend to own particular porpoises, and nothing will offend them more than to attempt to injure one of their porpoises" (Campbell 1875). Welsby (1917) reports that "...at Amity Point porpoises were so tame as to allow themselves to be handled by the blacks in the shallower waters..." With regard to the dolphins of Fraser Island, Curtis (1838) reported that "the natives almost deify...[them], and it would be death were any of their captives...[i.e. the survivors of the wreck of the *Stirling Castle*]...to kill or injure one of them."

Of the interaction on the Gold Coast, Gresty (1947) noted that “On no account would the aborigines kill a porpoise — they would as soon kill one another; the porpoise performs such a great service by driving the fish in towards the shore.” Turnbull (in Robinson 1965) describes the fate of a fisherman who killed a dolphin. “When they ran the net around the fish, they got a porpoise in it. One of these fellers was curious about this porpoise. He wanted to know how it came to be so clever. Well, out of curiosity, he killed the porpoise and cut it open on the beach.” When the tribal elders discovered that the man killed a porpoise after catching it in his net, “they took this feller who had killed the porpoise and killed him with a boomerang.” In relation to the orcas at Twofold Bay, Brierly (1843, in Dakin 1938) reported that “The natives...[Aboriginal Australians]...of Twofold Bay regard the killers...[orcas]...as incarnate spirits of their own departed ancestors and in this belief they go so far as to particularize and identify certain individual killer spirits.”

The accounts of both Turnbull and Mumbulla (in Robinson 1965 and 1976, respectively) also suggest that dolphins assisted and protected people in the water: “...when the old people wanted to cross the river in canoes, or by swimming across, the porpoises would always be there to chase away sharks” (Turnbull in Robinson 1965); and “No sharks would ever touch you with them killers there...if the whale-boat was out to sea, out of sight of land, an’ got smashed, the killers was there. They’d be swimmin’ round an’ round, keepin’ the sharks away...If them killers seen a man gettin’ tired, they would swim underneath him, put a fin under his arm, an’ hold him up until the launch came to pick him up” (Mumbulla in Robinson 1976).

This close relationship between humans and dolphins is in marked contrast to that between humans and the other common marine mammal in Moreton Bay, the dugong, which the archaeological record shows was hunted prior to European settlement (Walters 1980; Hall 1982) and Aboriginal exploitation of which increased markedly following the introduction of European technologies and markets (Fairholme 1856b). The special relationship of humans with the dolphins in eastern Australia is consistent with observations from other locations. For example, Crewe (1983) reports that the Mauritanian fishermen “invest the dolphins with a near divinity.” Furthermore, they were also certain that there was more to the cooperative fishing than mutual convenience. If the marabout (“priest”) asked them, the dolphins would do things that, although of no benefit to them, would benefit the fishermen.

Demise of fishing cooperatives

In Moreton Bay, it seems likely that a significant factor in the demise of cooperative fishing was the direct actions of some white settlers. Campbell (in Welsby 1905) observed that "...people who visit the bay are in the habit of taking shots at the poor old porpoises, both with rifles and shotguns, and the consequence is that they have become shy, and only very seldom can they be got to work to the advantage of the fisherman." The deliberate killing of the dolphin reported by Turnbull (in Robinson 1965) was considered to be the reason that those dolphins ceased to cooperate: "A good while after this...[the killing of the dolphin]..., some of the people of another tribe went down to the beach to net some fish. They beat on the water, they called to the porpoises, they sang them, but the porpoises would not appear." Subsequently, the man who had killed the dolphin was himself killed, however, "killing this feller did no good. It didn't make the porpoises come back. Those two tribes had a fight over the killing of that porpoise, but it still didn't do any good. From that time the porpoises would never help those people with the fish no more. No matter how they called the porpoises to come and help them, the porpoises stopped coming. They never came back no more."

According to Mumbulla (Robinson 1976), cooperative whaling finished when the Aboriginal people left Twofold Bay: "Soon as ever the dark people left Twofold Bay an' come up to Wallaga Lake, them killers went north. Why? Because there was no blackfellers there." By Meads' (1961) account it was a combination of older orcas dying and others leaving the area, ending an association which apparently had occurred for about 90 years to 1930.

Conclusion

This interpretation of the available literature suggests that, contrary to Halls (1984) suggestion that human–dolphin fishing cooperatives were restricted to the Amity Point area on North Stradbroke Island and southern Moreton Island, fishing cooperatives were probably quite widespread in eastern Australia. They involved both fishing and whaling, with Tursiops and Orca, respectively, and involved the hunting of more than one fish species. Different groups of people also used differing methods of "communicating" with the dolphins in the course of the various fishing cooperatives. The interaction could have adverse consequences for the dolphins and, in this respect, is similar to modern human–dolphin interactions. Despite the best of intentions, problems may arise.

The human–dolphin fishing cooperatives reviewed appear to have had significance at both the subsistence level and at the emotional and spiritual level. Thus, they are a clear precedent, albeit in a markedly different socio-economic setting, to the economic and emotional objectives and outcomes of modern dolphin provisioning. Clearly, the emotional outcomes sought from interactions with dolphins are not unique to twenty-first century western societies. However, the existence of this precedent cannot be argued as a justification for modern dolphin provisioning, particularly as adverse outcomes for the dolphins occurred in some of the reported interactions. Nevertheless, a greater understanding of traditional human–dolphin interactions may lead to a better understanding of the demand for this type of experience in modern society, and provide some basis for better management of dolphin provisioning where it is permitted to occur.

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