

Nomadic fishermen of Ja'alân, Oman

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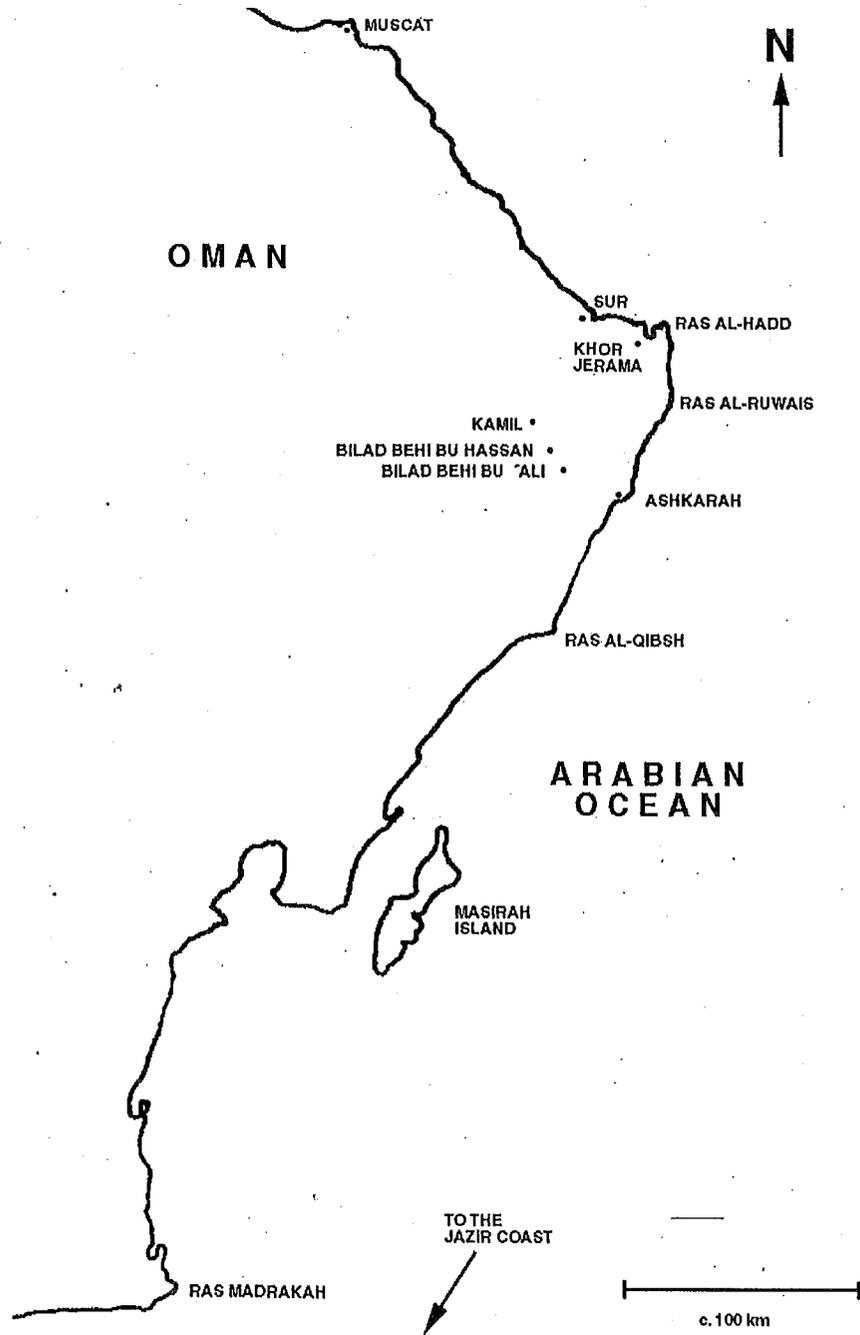
The area of southeast Oman studied is Ja'alân with the town of Ras al Hadd on the most southeasterly point of the Arabian peninsula. Ras al Hadd takes in the coastline between Shiyya and Daffa, and includes the lagoons and harbours of Khôr Jerâma and al Hadd as well as beaches between rocky cliffs. The rocky cliffs are the ends of mountain outcrops, between which are sand and gravel plains covered with scrub and, where there is groundwater, permanent trees. These plains are referred to as the *wudiyân* or drainage systems, the mountains and cliffs as *jibal*, the lagoons as *khôr*, and the beaches as *sahil*. Within the area of Ras al Hadd there are a variety of resources, both on land and sea, which change over the seasons. None of these resource areas by themselves provide for permanent subsistence throughout the year in the views of the inhabitants. They therefore practise a multiresource economy of herding, fishing and date cultivation, which necessitates mobility over the year. The three aspects of the economy are integrated internally through exchange of goods and labour as well as by trade, and trade further integrates the area with the regional economy of Oman, Saudi Arabia and the Gulf (see Fig. 1 on the following page).

The local population is from a number of small tribes (each of which has members elsewhere), all of whom have been in the area for a long time, and who see themselves as *bedu*. By this they mean that they manage the resources of the area within particular moral premises,

and through particular social processes without the need for an administrative infrastructure provided by a central government. Tribal identity gives access to these social processes of access to and management of resources (Lancaster and Lancaster 1992b). Each tribal group is small and describes its relationships with others in conflicting and ambiguous terms, but every description of the groups using the area ends with the statement "but we are all one *jamâ'a* (community)". The *jamâ'a* is "the people who live, work and marry here." People "live" where they have developed resources. Resources, in the sense of the means of production – the fish in the sea, grazing, water, shellfish – come from God, and are available to all and cannot be owned. The tools of production – domestic animals, wells, nets, hooks and lines, boats, gardens – are the means of developing natural resources and are owned.

The different tribes are described as concentrating on different productive strategies; some herd, some fish, some concentrate on transporting or trading, whether by land or by sea. The tribes also "live" in particular locations, but they all "use" others in the management of seasonal resources (Lancaster and Lancaster 1992a). An example of a Beni 'Âmr family movement follows; about May, they left Ras al Junayz which they had been using for fishing and went to al Hadd, where they lived, and remained there fishing till August, when they moved to live in Bilâd Beni bu-Hassan for the date

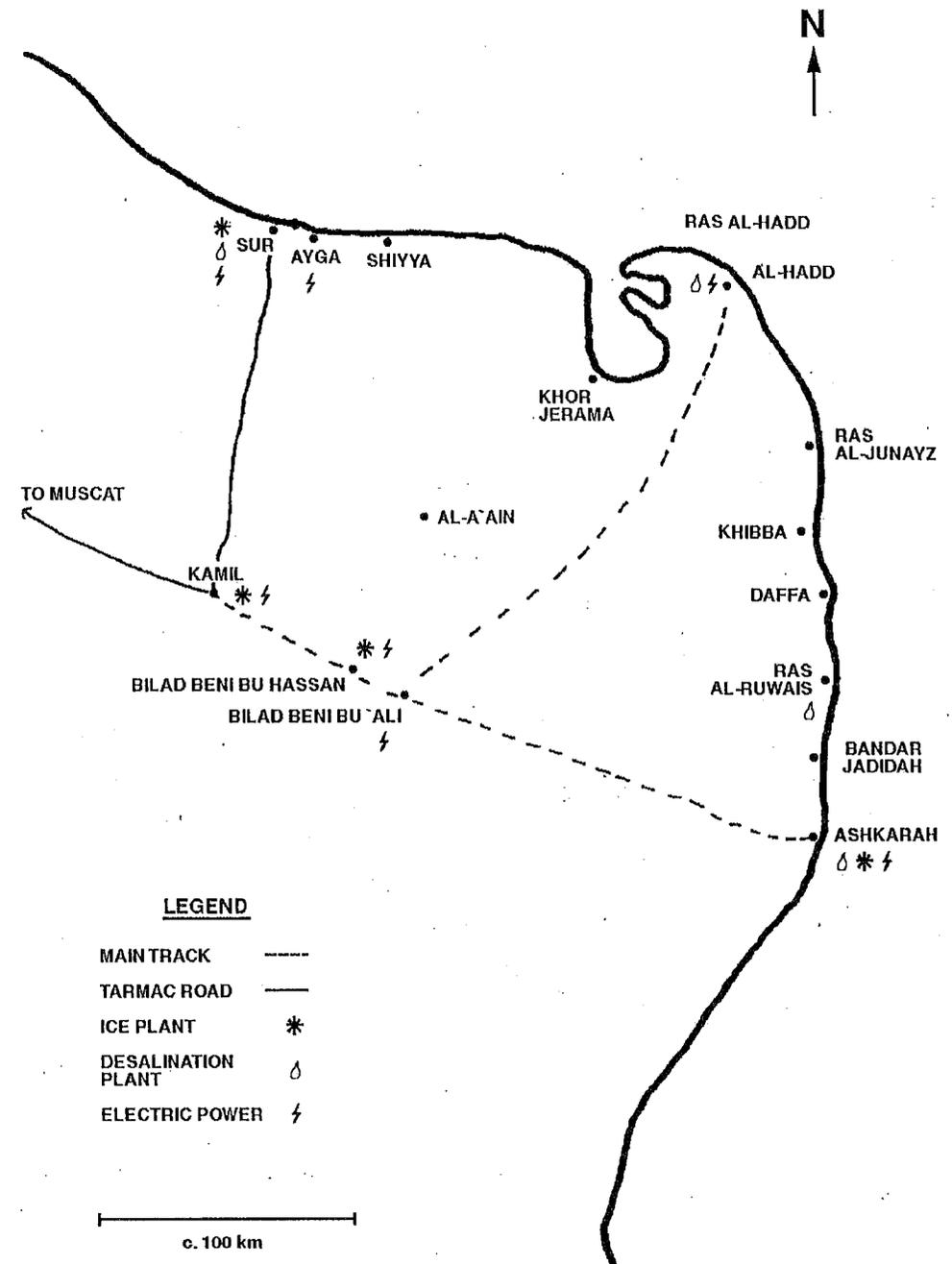
Fig. 1



harvest; in October, they came back to live and fish in al Hadd, and in November they moved again to use Ras al Junayz. These movements were ex-

plained as depending on seasonally prevailing winds and fish habits. As tribe is the only stable identifier of any individual or group, descriptions of

Fig 2



“where people live” and “what they do” must be in terms of tribe as if these groups were exclusive, solid and bounded, whereas speakers know that

any grouping is in fact partial and flexible. The *jama'a* is an informal network or community of individual tribesmen and their families, linked through women,

who actively participate in the management of resources of a locality. Marriage brings some groups within a patrilineal descent group closer and distances others. Men marry within their tribal section, or within their tribe, and each tribal section has a few marriage links to other tribes. Women are the active but invisible links between co-operating men in various productive enterprises. Men explain their presence in particular locations or activities in terms of closeness through women to some man already present, even when there are obvious male genealogical links available.

Within this perspective, the various locations and activities of Ras al Hadd are described by its inhabitants. Lorimer (1908: 1406) and Miles (1919: 404) report the small *bedu* tribes of Beni 'Amr, Muwalikh, Muhayyir, Beni Ghazzâl, Harb and Hikmân as inhabiting Ras al Hadd. Members of these tribes continue to live in the area, though most of the Muwalikh have gone to the Emirates, and the Muhayyir to the Bâtinah coast (these two concentrated on trading). The tribesmen fish and trade. In the wadis are herding tribes, Shumâghi, Muzammi, Musharaf and Mushaykh. Both fishermen and herders have date gardens or trees in the oases of Bilâd Beni bu Hassan or Bilâd Beni bu 'Ali. The three activities are bound together in an internal market of dried sardines, animal dung and fodder dates. Fishing households have members who herd, as well as the small household flocks herded by the women; and herding households have members who fish. Fishing and herding produced daily subsistence and storable surpluses for trade, and also gave the opportunity for providing services such as transporting by owning camels or boats. Long traditions of integration into regional markets exist, formerly the Gulf and the Indian Ocean by boat, more recently Saudi

Arabia and the Emirates by truck, reflecting changes in technology and markets.

Fishing practices are founded on local knowledge of the habits of fish species, based on an awareness of the nature of the seas, shorelines and lagoons, the differing seabeds, and the changes induced by seasonalities in winds, sea temperatures, currents and salinities (Hariri 1986: 23-7). Little inshore fishing takes place in the summer, and while offshore fishing used to stop in the monsoon season when sea trading took place, it now carries on throughout the year. These changes are signaled by the appearance of different stars, and produce different fish species, which require different techniques. There is an awareness of the habits of different fish, of food chains, and of the importance of marine plants for some species. Conservation of stocks is actively practised. Some are effected by ministry controls for particularly desirable market species, such as lobsters, but these do not affect the Ras al Hadd area. Local management techniques recognise the importance of the lagoons as spawning grounds, and fishing in the lagoons is allowed only for daily household subsistence by throw-netting or hand-lining from wooden canoes or *hûris*; all fishing is limited to particular techniques. The nature of production, with its emphasis on self-limitation by the lack of wage labour and the presence of share or owner participation only, also limits the amount of fishing by each household. Smith (1992) discusses maritime sharecropping or fishing tenure for Shetland, and sees it as a complex variant of sharecropping. Systems of shares in a wide variety of productive enterprises are common in the Arab Middle East and are seen by participants as allowing for a more profitable enterprise through the inputs of both sides (Lancaster and Lancaster 1995:

107). For Ja'alân fishing, the owner provides the *lanj* or *offshore boat*, the crew provide labour; within this, there can be a multiplicity of intermeshings of shares in the necessary equipment. Increasing output by using imported hired labour is banned by the Omani government.

Access to the seas and to the beaches is open to all provided that locally acceptable techniques and practices are followed; as these vary along the coastline, disputes may occur between local fishermen and those from outside. The disputes centre on the insistence of local fishermen that there must be sufficient fish left to provide for the future, rather than the taking of whole shoals of fish for immediate profit. Techniques that enable the taking of complete shoals are discussed in highly moral terms of individual greed and selfishness rather than longterm community maintenance. Fishing, like the other productive enterprises in *bedu* areas, is seen by its participants to be as much a social and moral activity with relevant and necessary economic aspects, rather than one of pure economics.

The fishing practices, in terms of aims, species, and techniques (allowing for substitutions of new technologies) have a considerable depth in time, as can be seen from the mentions in Albuquerque in 1507 of fishing for tuna from large boats (1875 ed: 61), while Wellsted in 1834-5 (1838: I, 79) and Miles in the early 20th century (1919: II, 401-9) both comment on fishing from inflated skins using nets and lines. Archaeological excavations have revealed coastal fishing and shellfish collection in the 7th millennium (Biaggi *et al.* 1984) and of well established fishing, herding and trading economies by the fourth millennium (Cleuziou, Reade and Tosi 1990, Cleuziou and Tosi 1994). It seems, from the literature and from local memories,

that fishing technology has not been a matter of progression from simple to complex, but to have fluctuated in accordance with the general wealth of the region and with the access of this particular area to it.

Local fishermen insist that there is no scarcity of resources as long as acceptable techniques are followed; there can be no scarcity, as everything comes from God and He is generous. What is scarce for fishermen is labour, since every crew is made up of those who have alternative means of livelihood, and who have to agree to put aside the alternatives for the period of the fishing trip or voyage.

Current fishing practices were observed at a variety of beaches; in the lagoon at Khôr Jerâma using throw-nets and hooks and lines from wooden canoes, offshore fishing with motor powered wooden *lanjes* from al Hadd and al Ashkarah, and inshore fishing using fibreglass or aluminium dinghies with outboard motors at al Hadd, al Junayz, Khidda and ad Daffa. Fishing from the beach with throw-nets for sardines takes place at all beaches, and fishing from rocks with hand-lines occurs at all suitable places. Lagoon fishing and fishing with hand-lines from rocks are only for feeding the family; all other types of fishing are for the market after the daily needs of the households of the fishermen and the *jamâ'a* present on the beach are met. Fishermen are not limited to using only one beach or roadstead, as movement between localities is part of fishing practice.

The various kinds of equipment have different spreads in the community, reflecting the different levels of investment in money, time, labour and commitment necessary.

All fishermen and their sons over the age of seven or eight have at least one throw-net; so do many herders. Throw-

nets are made either by netting the whole net or, more usually, from buying lengths of imported net and infilling between the two lengths so as to make a cone; this is then edged with heavier thread and weights are attached. Throw-nets are used especially for sardine fishing from the beaches on the coasts, and for sardine fishing from *hûris* in the lagoons; these same nets are also used in the same places to catch other small fish for daily food. Throw-nets with a larger mesh are used further down the coast to catch squid, a recent development triggered by the knowledge of a market for squid in Muscat and towns in the Emirates. Fishermen at Ras al Hadd explained the making of these other throw-nets by saying that if they learnt of a new market for a particular fish, and saw that they could be caught by adapting an existing technique, then they would do so if they thought it worth their while. As the beaches in the Ras al Hadd area are separated by rocky headlands, they caught squid in tangle nets around the rocks; further south, the coast has no rocky headlands so throw-netting would be more effective.

Most fishermen have some wire traps, *gargûr*, bought in Sûr and made there or imported from the Emirates. Some have up to thirty, others ten or so, some none. Although a boat is needed to put the traps down and to check and empty them, some own traps but use a boat belonging to a brother, cousin or other relative, or that of a member of the *jamâ'a*. *Gargûr* are laid around the rocky headlands during the winter months, when high winds and rough seas may be expected. They do not provide the most desirable commercial species, but reliably provide smaller fish for the market and for daily food.

Hand-lines and hooks are owned by every fisherman and his sons, and by

many not involved in full-time fishing. People fish from the rocks, especially in the sardine season, when other fish follow the sardine shoals in close to the shore and the rocks. This type of hand-line fishing is for daily food, with the chance of selling a fine larger fish to a trader. Hand-lines are used from wood canoes or *hûris* in the lagoon at Khôr Jerâma for daily food. Hand-lines on the dinghies and *lanjes* are used for commercial fishing for kingfish and for yellowfin and longtail tuna; different hooks are used for kingfish and tuna. On the dinghies, hand-lines for kingfish are attached to a pole tied across the centre of the boat, while for the tuna the lines are handheld.

Nets are of two main types. The smaller are the green tangle nets, with a mesh of one and a half inches, used around rocks for the smaller fish of which the milkfish, *biyâh*, is the most valuable, and for spiny lobsters. These nets are laid with quite long ropes from the floats to the weighted nets, so that the nets reach the rocky areas growing seaweeds on which *biyâh* live. The larger nets are gill nets of forty metres in length and one fathom (c.2 metres) deep, with a mesh of six to seven centimetres. These are used mostly for fishing in the surface layer of the sea, with floats attached to the top and weights along the bottom, and anchored in place. The nets are checked and emptied every day by the man who owns them, or who put them down if borrowed. The desired catches are of kingfish and yellowfin and longtail tuna, but many other species are caught and sold or shared among the *jamâ'a*. Most nets are black, but a few are green or blue and said by some to be more suited to catching tuna. Occasionally, nets are weighted more heavily and set for bottom fish, such as sand sharks and rays which are usually dried and used

for bait in the traps. Further south along the coast of the Wahiba Sands gill nets are more frequently set for bottom fishing. Monofilament net is never seen at Ras al Hadd, while further south it is sometimes seen used as tangle net from *hûris* for sandshark.

The boats are of three main types. The smallest and cheapest are the *hûris* or canoes. Traditionally these were made from one piece of wood, and varied in length from around two and a half metres to four metres. The larger ones often had a mast and sail, and were called *tarad*. Some are in use, and it is possible to have a new one made in the boat-building yards at Sûr, Ayga and al Ashkarah, although many people now buy fibreglass canoes. *Hûris* are crewed by one or at the most two men. These are used in the lagoon at Khôr Jerâma, and off the beaches for fishing for the family, using hand-lines, tangle nets and by a few, small gill nets. The next size up are the aluminium and fibreglass dinghies; the aluminium ones (also *hûri*) are about three metres, the fibreglass (*fibâr*) are in two sizes at three and a half metres, and at four and a half metres. The larger fibreglass dinghies are concentrated at al Hadd, where they are used as tenders to the wooden *lanjes* and for inshore fishing. The smaller dinghies are used off the beaches for inshore fishing with crews of two or three. The larger dinghies are used particularly by two or three young men for hand-lining for kingfish and tuna, while the smaller dinghies are used for hand-lining but concentrate more on gill netting, tangle nets and traps. The large offshore boats are called *lanj* by the fishermen and *sambûk* by Sûr boatbuilders (the latter define boats by form so that a *hûri* is any double-ended boat whatever the length or material, and a *sambûk* is any boat with a transom). The *lanj* are wooden and built at Sûr, Ayga and al

Ashkarah to order and the yards are busy with repairs and new commissions. These boats look like gulls at rest on the water, and fishermen say that the painting of the projection from the bow in black and white represents a seagull's head, and the projections beyond the transom represent the folded wings. The keel and hull are built first, and the frame are added later; this gives flexibility and resilience, together with lightness which was important when open beaches are used. Fishing from a *lanj* requires a crew of five or six men, and uses gillnets, lines and traps depending on the weather and sea, and the type of fish sought.

The different types of boat are used for different types of fishing, with the proviso that for all the immediate purpose for fishing is the feeding of the family, household and *jamâ'a*, and then supplying a market. The *hûris* use either the lagoon at Khôr Jerâma, or go up to a kilometre out from the beaches and coves. The aluminium and smaller fibreglass dinghies are used off the beaches, and like the larger fibreglass dinghies rarely go out of sight of land, or are away from a beach for longer than eight hours. The *lanjes* are used offshore, coming back after an overnight trip, or an all day trip, but primarily fish for a month to six weeks at a time between Abu Dhabi and the Jâzir coast south of Masîrah Island; most of their trips are down to Masîrah.

The methods of using lines, traps and nets are similar whether the fishing is from a one man *hûri* or from a *lanj* with a crew of six. The decision of where to set the net or trap is taken by the owner of the trap or net, and it is his responsibility to check and empty it. It is common courtesy not to put nets or traps so close to those of others that access is difficult, or that the nets, floats and anchors may become entangled. It is also necessary to leave gaps between the nets, which are

always laid parallel to the shore; the markers for the nets delineate a wider space than the nets actually occupy. There tend to be two or three groupings of nets off any beach, with wide spaces for boats, turtles and fish in between (these beaches are used by turtles for egg-laying; the turtles are protected by the Omani Ministry for Agriculture and Fisheries, and liked by the local population). The crew of a dinghy are often partners with each other, or with a third party who is often an older family member; crews are fairly, but not invariably, stable. Each crew member may own his own traps, lines or nets, though they will generally be considered to be held in common; this is particularly so where the boat is owned by an older family member and crewed by his sons or a son and a nephew. Crews that are partners in owning the boat may hold their nets individually, or together. Crews where one member owns the boat, and the second is the crew, hold their equipment individually. Arrangements about net-mending, anchors, petrol for outboards, and repairs are flexible, although net-mending tends to be done by the older men of the crew members for those nets.

The same arrangements hold for the *lanjes*, where the six-man crew comes from the household in its widest sense, some of whom will own nets and/or to have contributed to the financing of the boat and the engine. Essentially, the crew are partners for that particular fishing trip, with the decisions being made jointly around the ideas of the owner. The owner must share decision making with his crew, because of the ethics of the *jamâ'a* where all are equal in the eyes of God and responsible for their own actions.

Herders may own throw-nets, lines and nets, and may spend a season fishing from a beach using a relative's din-

ghy, or as a crew member on a *lanj* for a season.

Daily inshore fishing by *hûri* and dinghy starts shortly after dawn examining nets. Each net takes up to an hour or an hour and a half to check, and to get the fish into the boat. Large fish are often cut out of the nets. Damaged or very tangled nets are brought into the beach, anchored in the surf and disentangled, then dragged up the beach by the crew and those on the beach. Tangle nets around the rocks take less time to clear. Traps are cleared every three to four days, and it takes about fifteen minutes to raise the trap, clear and rebait it, and then replace it. Occasionally in bad weather it is not possible to check nets and traps; when the weather clears, dead fish are taken from nets and traps and brought to the beach for disposal by drying and then burning.

The catch for sharing is open to view in the middle of the dinghy, that for trading is concealed at front and back. The fish for sharing is handed out to those on the beach, including herders, from the *jamâ'a*; tourists are expected to pay for undamaged lobsters, tuna and kingfish. Fish is kept for resident families, and if the fish are few, then it is divided into equal shares. If, as occasionally happens, there is no catch, women come down to the rocky coves and collect shellfish.

Traders arrive on the beach around two hours after dawn; hand signals are made between crews in the boats and traders on the shore about size and quality of catches. Crews nearly always sell to traders from the *jamâ'a*, with outside opportunist traders only being sold fish if no *jamâ'a* traders are present – for which the usual reason is that there had been a very good catch on the previous day and *jamâ'a* traders had not returned from taking it to Kâmil, Muscat or further. Some crews take their fish, if the catch is big

enough, directly to Sûr or Bilâd Beni bu 'Ali to trade it themselves. Traders cooperate among themselves and the fishing crews in making up loads to take to Bilâd Beni bu 'Ali or Kâmil where the larger traders are, if catches are of mixed species and the number of each type is small. Traders either pay immediate cash, or note down the catch and promise to pay later after it has been sold on at auction in Kâmil, Sûr, or Muscat; this happens mostly with fish from tangle nets or traps, where the prices are not so well known.

If there are signs of kingfish or tuna, some dinghies may hand-line for a while but it is more usual for a clean and mended net to be reset, the boat to be washed, and the crew to go home. Crews appear on the beaches again after two, when nets are examined or relaid, and hand-lining is then common. The decision to hand-line or not appears to follow what other boats from other beaches are doing, bird and fish behaviour, or the pressure of other work. If kingfish are thought to be around, poles are tied across the dinghy, to which the hand-lines are attached, each line having a triple hook, and a metal fish shaped spinner to attract the fish. The dinghies go some way out and then drive fast, parallel to the coast in the current. Hand-lining for tuna uses fresh sardines as bait, and uses a line with single hooks on wires at right angles to the line; these lines are handheld, the fishermen having wrapped their hands in rags. The boats for tuna drift slowly. This kind of fishing is described as exciting and can be dangerous if the caught fish are large as they often are. Sailfish and swordfish are also caught in this way. It is young men who hand-line; older men regard it with a degree of amusement, and say netting is a more profitable way of catching kingfish and tuna. Traders often come to

the beaches in the afternoons. The dinghies from the beaches use gillnets on moonless nights.

Throw-netting for sardines from the beaches takes place during daytime when shoals are sighted close to the shore. The sight of shoals arouses real excitement, understandable given the importance of sardines in the local economy, and as indicators of kingfish and tuna. Fresh sardines are eaten, or used as bait. Most sardines are laid out to dry in the sun and wind, turned and returned, then thrown into heaps and finally bagged. These are used to feed the household goats, cows and camels, but most are sold to herders from the wâdis who come down to the beaches. The herders buy them for their own animals, and to sell in the markets at Bilâd Beni bu 'Ali and Bilâd Beni bu Hassan.

Lanjes focus on offshore fishing around Masîrah Island and the Jâzir coast for kingfish and tuna. The *lanjes* also fish for these off al Hadd itself, going out at night; they also fish for lobsters and other trap species. *Lanjes* have a crew of six, a mechanic, a steersman, three crewmen and the owner. The way in which gillnets are used is different. A *lanj* has up to twenty nets, each 100 fathoms or 'ba' long (i.e. about 180m) and made with a twelve centimetre (five *bûsa'*) mesh. The *lanjes* go up to 20 kilometres out from land. The nets, joined together in a long line, are put out on an anchor and the other end remains on the boat, which then stops for the night. As dawn is breaking, the men start to haul the nets in and remove the fish. The nets are stored on deck, never left down or replaced in the same spot. When fishing off al Hadd, the fish are sold to traders in al Hadd or taken to Sûr. At Masîrah, the boats sell to traders who come around the boats, or take the catch to Masîrah Island.

Fibreglass and aluminium dinghies do not need much maintenance, but the wooden *hûris* and *lanjes* do. The *lanjes* are brought in to natural harbours like al Hadd every two months and beached on the tidal creek beaches. The hull needs cleaning and whitening five or six times a year, and at the same time the wood above the water line is oiled with shark oil. The whitening is for waterproofing, and for deterring marine worms; fishermen claim it is more efficient than anti-fouling paint. The whitening or *nûra* is made from burnt limestone, either purchased or made by burning limestone or seashells, and mixed with camel fat. The hull also needs recaulking or repitching once a year.

Fishermen pointed out that while fish species generally arrive in due season, announced by the stars, each season is different in the precise way fish species use the area. An extended period of northerly winds in December 1988 was said to result both in a lack of kingfish near the coasts because the wind lowered coastal surface sea temperatures too much for kingfish, and in making access to the sea difficult for dinghy fishermen. A number of *lanjes* stayed fishing around al Hadd using traps and nets for tuna and sailfish rather than go to Masîrah for kingfish. 1987-88 was described by local fishermen as being relatively poor for sardines, but good for other species, while 1988-89 was exceptionally good for sardines and poor in the others. It was this second period that had the lengthy period of northerly winds. Generally people said fishing was better on moonless nights, and when the sea was not too calm. These views were generally corroborated by observations of fish catches.

All fishermen maintained that success in fishing came from God, not from individual skill. The fish were in the sea, but it was from God that the fish went into the net, trap or hook. This attitude re-

flects the religious view that the means of livelihood are from God, who is generous, and that all men are equal before Him, but also a moral view where all are entitled to livelihood. This contrasts with the ideas of 'luck' in North Atlantic fishing crews from Shetland and Newfoundland (Byron 1989), and Palsson's (1989) discussion of Icelandic views on the difference in catches, where skippers have "fishing moods". The Omani religious concept also holds for short-term subsistence, where no-one would be denied water, the collection of shellfish, the use of a throw-net or hand-line, or grazing for household animals. But "living" is for subsistence and for surplus for a market, and access to resources for surplus is restricted to those who "own" the area – or who "own" assets somewhere else and therefore are temporary users, just as the "owners" of the area also "use" other areas. Fishermen who have houses in Khôr Jerâma fish from Masîrah, and fishermen from al Ashkarah or Bandar Jadîda or Sûr fish off al Hadd or Ras al Junayz. Partly the acceptance comes from the reciprocity of access, but more from a common attitude to resource management, in which the aim is to have a reasonable livelihood and to maintain the certainty of a livelihood for one's children rather than to make the greatest profits. There is a real feeling that profit (or excess profit) should be sought outside an economy based on seasonal natural resources. The disputes between the fishermen of Ras al Hadd and Sûr, and between those of Ras Madraka and Korean trawlers (to be discussed later) are both based on this premise.

Access to the means of fishing is not difficult and is open to all. Every man and boy has at least one throw-net. Although these are now bought, it is possible to make them from natural materials as was done in the past. Boys start fishing with throw nets and hand-lines, and

then make or buy tangle nets; by helping to haul nets and boats up the beach, cleaning boats and carrying out errands, they can 'earn' a seat in a dinghy to set their net or trap. Later, they become a crew member in a dinghy, and with their share of the catch or the proceeds of their own catches buy traps or a net or share of a net, or they might be given a net or traps by an elderly relative. Fishing is a skill available to all if people observe the sea and coasts, and the birds, fish and dolphins on the one hand, and the practices of fishermen on the other.

The financing of more expensive items such as the large nets, boats, and traders' pick-up trucks is from profits from the various enterprises of members of the wider domestic network. Various figures were given for the costs of a *lanj*, engine and nets from about 10,000 Omani Reals (c. £20,000 at 1989 exchange rates) to 20,000 Omani Reals; a *lanj* on its own was considered cheaper than buying a new GMC pickup for fish-trading. People emphasised that the money was raised inside 'the family' (i.e. in its widest sense), and was paid off within two to four years. The various contributions came from profits in fishing, fish trading, herding, date gardens, construction enterprises in urban areas, employment in the Omani civil service or in the armed services of the U.A.E. As fishing is held to be profitable, it is easy to attract investment by family members. Those investing money have shares in the enterprise, and these shares either last for the period of the enterprise, or are paid back relatively quickly so that ownership is in the hands of those actively running the fishing. Which pattern is taken tends to depend on the degree of closeness between the active and general partners. Two examples were given; in the first, 50% of the catch or its value, went to the owners of the boat who were responsible for the boat's expenses, and the other 50% was

divided equally between the crew: in the second, when fishing off al Hadd and returning each day, the owner took half of the net profits, and the other half divided equally among the crew; if fishing off Masîrah, each crew member got one and a half shares and the owner got a quarter of the profits. Fishermen estimated that the average profit of a crew member on a *lanj* in a season was 1,000 ORs.

The main concern of participants is that all should gain a livelihood in proportion to their need and in relation to their investment in capital or labour. Each participant also has alternative sources of income open to him, and people switch occupation. The great majority of men fish for sardines in season, and the value of a man's catches in an exceptional season may reach 750 ORs. Inshore fishermen have at least one fish trader close to them; the change in the value of fish on the beach and at the markets in the Emirates or Saudi Arabia is between six to eightfold. With a fish trader in the family, the profits from fishing stay closer to the fishermen for while money belongs to the man who has produced it, it is also available to other family members for necessary expenditures and for investment opportunities. Also, fish traders fish, and fishermen become traders (see Lancaster and Christie 1989 for the different situation in the Wahiba Sands coast). In addition, most have date gardens or trees, and at least a household herd; most families have at least one member who receives a pension from the government, and another who has an interest in trade or transport.

Local explanations of the changes between the past and the present focused on technological introductions, and the development in markets for fresh fish that these new technologies allowed, together with an appreciation that these were financed by oil wealth in the region.

Since these had taken place in Oman mostly from the 1970s, they are associated with the reign of Sultan Qabus and contrasted to that of his father, although this is not altogether accurate since oil exploration and development had started under the reign of the former Sultan. It is said now that fishing for the fresh fish trade to Saudi Arabia and the Gulf is more profitable than the earlier trading from Ja'alân to India and East Africa.

The trading used the monsoon winds with the wooden *lanjes* and *bad'ans*. *Bad'ans* are now obsolete; as they were more lightly built than the *lanjes*, they shook to pieces when engines were installed in the 1940s. *Bad'ans* were built on the beaches, with the wood being pit-sawn on the shore; and they had sails and paddles. Old men still spoke with feeling of paddling back from East Africa if the monsoon winds were weak. Three Beni 'Amr brothers at Khôr Jerâma owned a trading *lanj*, which made the journey to Basra for eating dates, back to Khôr Jerâma where they sold the eating dates and took on fodder dates as well as salted and dried fish, and sailed the three days to Gwador, and on to Karachi, Bombay and Calicut, selling the dates and fish where they could and buying wood, textiles, rice, spices and anything they thought would sell, and returned to Khôr Jerâma. They unloaded some of the Indian goods for trade to the Omani interior, and picked up more fish and dates and then went along the Omani, Yemeni and Somali coasts buying and selling as they went until they arrived in Mombasa or Zanzibar where they bought wood and spices. This trade is very like that described by Villiers (1940) for the 1930s. People said that this sea trading came to an end during the 1970s, when the fresh fish trade to the Gulf and Saudi Arabia became possible and was more profitable. From this date, *lanjes* continued

fishing throughout the monsoon period although fishing from the dinghies at this season did not take place as the sea was too rough for these boats and the fish were further out from the coast than the dinghies go. It is also the time of the date harvest, and many people go to their gardens in Bilâd Beni bu Hassan, Bilâd Beni bu 'Ali or al Ain.

The older men who had taken part in this trade pointed out that the amount of fishing that could be done in the past was limited in several ways. *Lanjes* and *bad'ans* were used for fishing, but their real purpose was trading. Fishing was done from *hûris* and *tarads*, which were sailed or paddled, and therefore took longer. Not all fishermen had boats, many used inflated skins on which they swam out a kilometre or so to set 15m. long nets of cotton, hemp or palm fibre made by themselves. Traps were made out of wood and palm fibre. Metal hooks were said to be in short supply locally, and men brought them back when returning from working in Kuwait as guards or labourers in the 1950s. The limited coastal water supplies were regarded as restricting the development of fishing. There were shallow wells, as there is a shallow fresh water table; but these were quickly exhausted. Better supplies of water were to be found in some of the wadis, but this meant fishermen had to walk some kilometres to the beaches, carrying water, before fishing could be undertaken.

The impression is given that before the development of the fresh fish market, the local exchange – of fishermen selling sardines to herders, herders selling animal dung and sardines to the oases for the date gardens, and date producers selling dates to herders and fishermen, with herders transporting by land and fishermen by sea – was as important to the economy as the long-distance trading to India and East Africa. Both were essen-

tially for subsistence, in an economy concerned with maintenance rather than the accumulation of wealth even though both used shares, credit and futures, and were backed by contracts, guarantees and restitution.

A market in fresh fish needs large numbers of buyers in concentrated groups who can afford the product, fishermen who can produce the desired species, and traders who get the fish to the buyers before spoilage occurs. This requires modern transport and an infrastructure of roads, ice plants, and petrol stations. Fishermen need the means of increasing catches, partly by increasing the size of nets and modern boats with engines, partly by being able to buy nets and boats rather than having to spend time making them, but also by being able to live on the coast for longer. Local people say that the crucial factor was the provision from oil revenues by Sultan Qabus of desalination plants at various points, the relevant ones being at al Hadd, Sûr, and ar Ruwais. Fishermen could then live on the coast all year round if they wished. The urban markets with purchasing power for fresh fish came from employment in the oil industry and in all the other employment opportunities oil wealth created in the rapidly growing towns of Saudi Arabia and the Gulf, together with those of Oman itself. Thus all the conditions were backed by oil wealth in Oman itself and in the wider region.

What has been the results of these changes? People say they are more prosperous, and point to new houses, pickups and cars, dinghies and canoes, and new gardens. They have water, schools, hospitals, roads, and electricity. The educated have opportunities for employment in the ministries, local government, and the armed services. There is a thriving economy fueled by oil money. Local people in Ja'alân give the

Sultan credit for bringing this about, as he promulgated in his development plan for the Omani nation in 1971 in which he promised to 'build a society in which all may live in peace and security and earn an economic livelihood' (Janzen 1986:182). They also see themselves as benefiting from these changes by their own efforts, not only in adapting to new opportunities but also by using traditional political processes to enhance or to ameliorate particular proposed local developments. On the other hand, they see themselves as working harder to keep their families in the now greatly increased material goods, and are not wholly convinced that the end results are any better than with their former lack of worldly possessions.

The aim of rule expressed by Sultan Qabus is compatible with that of the bedouin fishermen and herders of Ja'alân, but the state perception of access to resources by all Omani citizens causes problems. The position of the *jamâ'a* is that resource access for a livelihood is limited to those who live in the area, who have developed the resources to be more productive, and who, by living there, have a concern for the longterm sustainability of resources. This is seen as not a concern of those who move in from outside to use the area, as they live somewhere else where they would wish to safeguard assets for the future. All disputes seen between *jamâ'a* members and those from outside concerned this point.

Two examples of fishing disputes follow, one from Ras al Hadd and the other from outside. The dispute from Ras al Hadd concerned fishermen from Sûr who used what appeared to be a purse seine net for sardines off the coast at Ras al Junayz, where a series of whole shoals of sardines were taken. This is contrary to *jamâ'a* practice which has strict rules about sardine fishing – only from a beach and by throw-netting – because of the

place of sardines in the food chain of kingfish and tuna. They know that on the Bâtinah coast sardines are caught by long nets that enclose a whole shoal, but say that sardines spend a long period at the Bâtinah coast whereas they are in passage at Ras al Hadd. A corollary to this was that Sûr fishermen have access to the waters off Ras al Hadd only if they use *jamâ'a* techniques; otherwise, they should fish off the Sûr coast. The Sûr fishermen defended themselves by including Ras al Hadd in the *wilayat* or province of Sûr, and that therefore their preferred techniques for sardine fishing were appropriate. The leading men of the Ras al Hadd fishermen went to the Wâli of Sûr, and to the local Ministry of Agriculture and Fisheries, but got little satisfaction, even though they had a document from the Ministry of the Interior saying that for fishing, Ras al Hadd was not part of the Sûr *wilâyah*. They then went to the Ministry of Agriculture and Fisheries in Muscat, and at the same time involved the shaikh of the Harth tribe, with whom they had traditional political ties and who has a national reputation; this was relatively successful. The other dispute involved Korean fishing boats, accused by local fishermen at Ras Madraka of trawling at night for lobsters, and of throwing back into the sea any fish caught that were not commercially valuable. The lobster trawling was contrary to the agreement between the governments of Oman and Korea, and the disposal in the sea of dead fish was against local practice. Complaints to local officials and to the ministry in Muscat had not resulted in any satisfaction to the local fishermen. Lobsters are a valuable catch in that area, and local fishermen are allowed to catch them only in traps as a way of conserving stocks. They accepted this limitation, but saw no reason why foreign crews should not abide by the terms of their contracts, which in the

view of locals, did not include fishing for lobsters at all, let alone by trawling.

The point at issue in these questions of access to and management of resources between local fishermen and those from outside is essentially one of symmetry. It was said earlier that fishermen were not limited to fishing off their coastal beaches, but moved following fish stocks. Sûr boats did fish off Ras al Junayz, *lanjes* from ar Ruwais, Bandar Jadîda and al Askarah used al Hadd, *lanjes* from Khôr Jerâma and al Hadd fished from Abu Dhabi to Masîrah and the Jâzir, dinghies from ar Ruwais trapped lobsters off Ras Madraka, and those from Daffa fished off Ras al Junayz and al Hadd and vice versa; but in all cases there was an acceptance of common practices, a symmetry. In a similarly symmetrical fashion, each family has a link/s through women to a family of a distant tribe, and these links are used to get access where it would otherwise be difficult. Access is sometimes for herding, fishing or trading if conditions in the normal range are difficult, or may be used in political matters. One example is where the leading man of Ras al Junayz used a link of this type to get better access to the Wâli of Sûr in a recurrence of the fishing dispute mentioned above. These links are symmetrical, and while an individual may use them for his advantage, he can be used by those to whom he has links for theirs.

This symmetry of relationships is seen as lacking in the modern bureaucracy of government, whose guarantee of access to all nationals is said to permit the use of areas such as Ja'alân by those who have no commitment to its future but only to their own profit or pleasure. The modern system can be mitigated somewhat as officials are also tribesmen. The fishermen of Ras al Hadd work actively towards maintaining management of fishing off their coasts in accordance with

their belief in the necessity for such practices for a viable future. They adopt new technology and methods where they see they are consistent with their longterm aims, but reject those that are not. For example, aluminium and fibreglass dinghies are part of fishing practice, as are nylon nets and lines; but monofilament nets, seine nets and very small meshes are not. Ras al Hadd fishermen did adopt seine nets that reached across the whole beach at Ras al Junayz in the early seventies, but found to their dismay that fish stocks dwindled rapidly and abandoned the technique. Some *lanjes* in al Ashkarah had had winches fitted for raising nets, but found that it was difficult to adjust the rate to fit with removing the fish by hand, and took the winches off. Imported anti-fouling paint was tried on the *lanjes* but found to be more expensive and less effective than the traditional method of mixed burnt lime and fat.

Local fishermen know about government initiatives to develop fishing production through the development of large national companies, and bank loans for larger boats, but they see no reason to participate. They wish to keep their fishing production within the capability of the wider family for funding, labour and maintenance and so perpetuate long standing social patterns based on moral premises that give identity. The production achieved by the Ras al Hadd fishermen and distributed through their traders is a valuable and sustainable contribution to both the local and the national economies.

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Appendix

Fish species caught:

agûm, *'agâb* – barracuda
'andaq – jobfish
bahâr – bonefish
bashkel – queenfish
biks – golden trevally
biyâh, *biyâr*, *baihâr* – milkfish
dîq – big eye
fantût – ray
ghuthr – squid
hamûr – snappers
jarjâr – shark
khudair – red spot emperor
mekh – swordfish, sailfish
nagrûr – grunters
qanad – kingfish
safiyya – rabbitfish
sahwa – yellowfin tuna
shurûkh – lobster
sigâla – rainbow runner
soghdân – bonito
umma – sardine
yidr – longtail tuna

The English names are taken from the card "Fishes of the Souk" published by the 'Friends of the Oman Aquarium'. Species for which we have no English names are *ghilân*, *wukhbâg*, *sithr* and *bu'gûb*; these are all small fish caught in traps or by hand-lines.

Fish when dried changes its name; for example, dried shark in Ras al Hadd is

hlaih or *luwâl*, but in Dhofar is said to be *alkham*.

Fishermen said that before they entered the fresh fish market, they used more local names for different species. They said this had remained for shellfish, as they still have a purely local consumption. However, many fish have a variety of local names.

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Résumé

Dans cette étude les auteurs présentent une esquisse de la communauté des pêcheurs nomades de Ja'alân, dans l'Oman. Ils décrivent leurs techniques, les types de bateaux employés, les pêches selon les saisons et les régions. La composition des équipes, la distribution de la cueillette et le commerce sont examinés, ainsi que le financement de l'équipement et l'accès aux ressources. Ils font un bref exposé des pratiques traditionnelles et des causes du changement.

Resumen

En el presente trabajo sobre una comunidad de pescadores en el sudoeste de Omán se describen sus prácticas y técnicas actuales de pesca, los tipos de embarcaciones que emplean, las especies pescadas y las variaciones geográficas. Además se tiene en cuenta la composición de las tripulaciones, la distribución de la pesca y su comercialización así como el financiamiento de los equipos y el acceso a recursos. Se señalan además modificaciones históricas de algunas prácticas de pesca.

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