

CHAPTER 5

TROLLING TECHNIQUE

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CHAPTER 5: TROLLING TECHNIQUE

SECTION A: THE VARIETY OF TROLLING CONDITIONS

There is no 'standard' way of trolling, and certainly no universal formula for success. So many things affect the troll fisherman's chances of fishing success that conditions change daily, or even faster. Many of these things are outside the fisherman's control -season, weather, moon and tides, the movement and behaviour of the fish, and so on. However, there are several things that the fisherman can influence -the location he chooses for trolling, the gear he chooses to use, and the way he presents his gear to the fish.

Choice of fishing grounds

Probably the most important choice the fisherman has to make is where to troll. Fish are not found evenly spread in the waters of the ocean, but occur in patches or groups which move in response to changes of season, weather, ocean conditions, and from day to night. In this chapter, we will consider the different types of fishing grounds the fisherman can choose between, and how they affect the selection and presentation of his gear.

Most fishermen have some choice about the type of area in which they will troll. In practice, the choice is limited by the local geography, prevailing weather and sea conditions, and things such as the capabilities of the boat. In some areas, there may be no lagoon, while in others the outer barrier reef may be too far distant for easy access, or may mean extended travelling times through less productive grounds in order to get there. Nevertheless, even with all the limitations in mind, at the start of the fishing day the fisherman still has to use his judgement in assessing the prevailing conditions and deciding whether and where to fish.

In this chapter we have tried to classify several reasonably distinct trolling environments. Each of these has different characteristics which the fisherman must recognise and account for in order to fish successfully. These environmental types discussed in the following sections are:

- lagoon and inshore areas (Section 5B)
- outer reef edge and offshore reefs (Section 5C)
- deep ocean waters (Section 5D)
- surface tuna schools (Section 5E)
- fish aggregation devices (Section 5F).

Selection of gear

The choice of fishing location is a major factor in determining the right type of fishing gear. However, several other factors also limit which lines, baits and lures the fisherman is able to use, and these are discussed in Sections 5G and 5H.

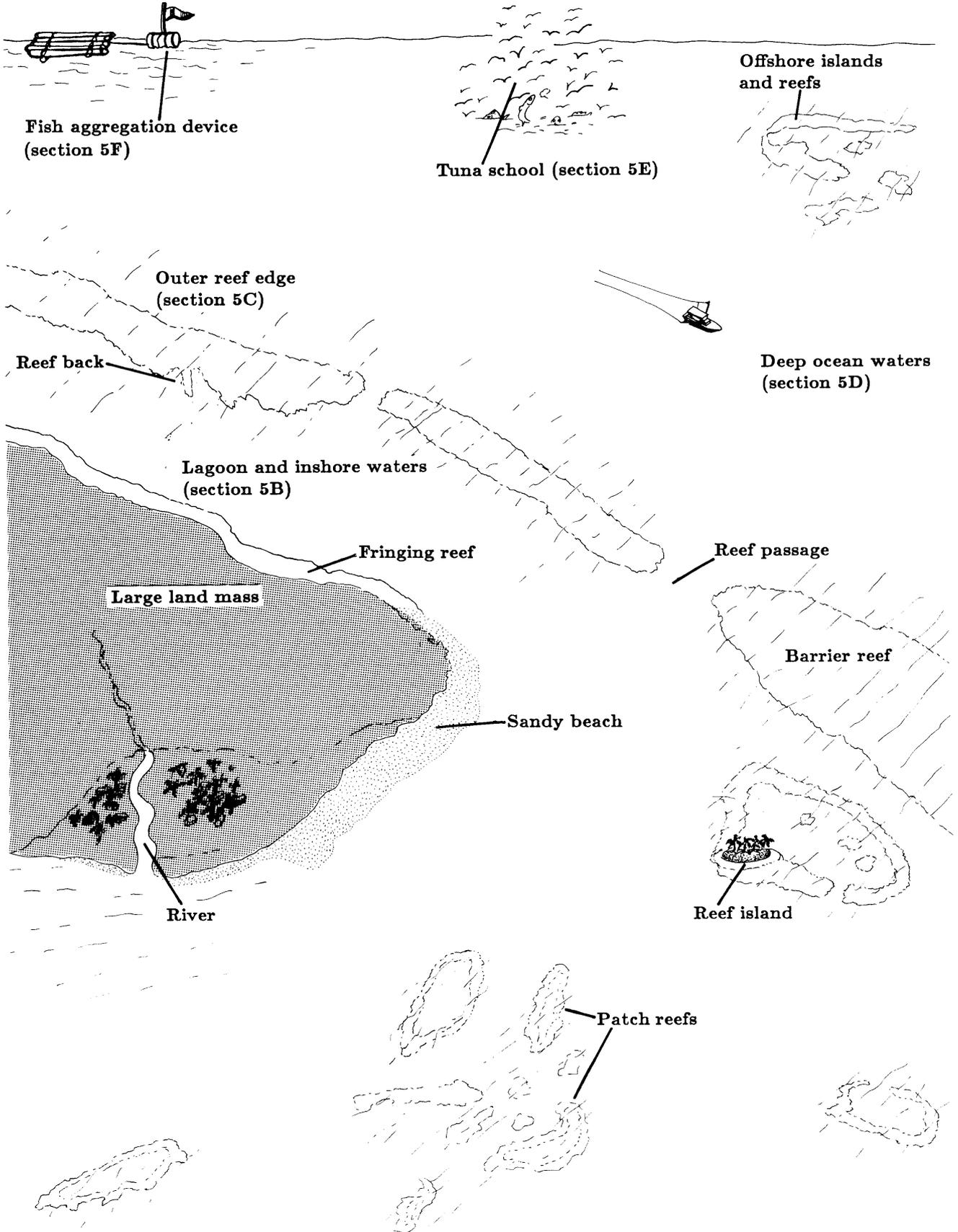
Presenting the gear to the fish

Once the gear is in the water, there are several further choices to be made regarding its presentation to the fish. Altering the trolling speed may make the bait more attractive to the fish, and will affect the way it 'swims'. Adjusting the line length changes the bait's position relative to the boat, and affects its overall pattern of movement. The depth at which the lure is trolled is important in the capture of some species, and can be altered by changing the trolling speed or the line length, by using different line materials, or by adding sinkers or diving devices. The factors which affect these choices are discussed in sections 5I and 5J.

The importance of experimenting

The tips and comments given in this section are based on observations about some types of fish at some locations in the Pacific at some times of day or year. They are not rules, because there are no rules for trolling. Like all fishing methods, trolling is a science, but not an exact science, and experimentation is the key word. You must keep trying new approaches in an effort to work out the combination of gear and fishing pattern that works for your boat on that particular day. Remain observant while on the water, try to notice things about local fishing conditions and the behaviour of the fish you are trying to catch, and take advantage of them. The biggest problem for a troll fisherman is laziness. You have to work at trolling, and the rewards are often in direct proportion to the amount of effort you put in.

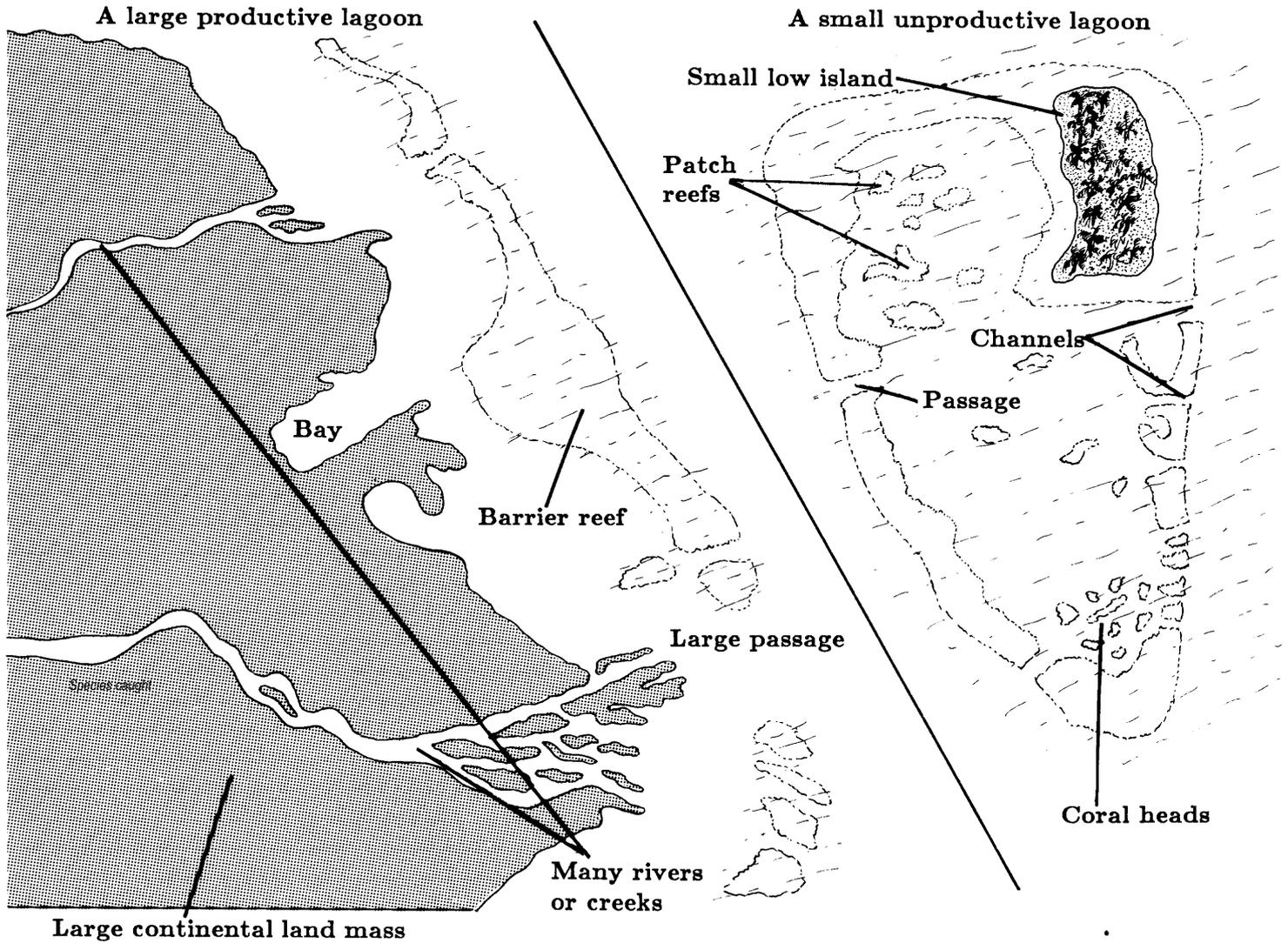
TYPES OF TROLLING GROUND



In most Pacific Islands, a coastal lagoon lies between the shore and the open sea, and the fisherman has to spend at least a short time trolling through this in order to reach other trolling grounds. Therefore, most fishermen usually carry out some lagoon trolling, even if this only means of half-heartedly towing a couple of lures while travelling.

The productivity of lagoon waters depends greatly on the size of the nearby land masses. Around the larger continental or high islands, lagoons are often very rich and may periodically abound in some large-sized migratory seasonal fish species, such as Spanish mackerels. Where the islands are small or low lying, the lagoon is often less rich, and large fish may be rare. In all situations, however, lagoon trolling (especially around reef patches, or close inside the barrier reef) produces its share of smaller fish and is a very important source of good trolling baits.

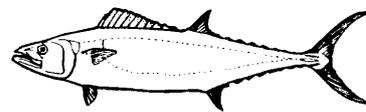
TWO DIFFERENT LAGOON TYPES



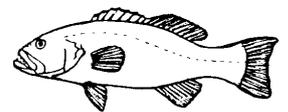
SOME OF THE FISH CAUGHT

Species caught

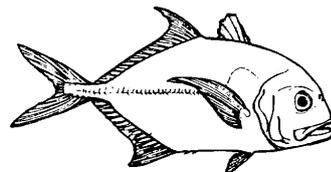
These will vary depending on lagoon type and geographical position. Larger, seasonally abundant Spanish mackerels occur in some of the large lagoons in the Western Pacific. Otherwise, typical lagoon species include barracudas, shark mackerel, mackerel tuna, trevallies, and diverse other species such as groupers and rock cods, wolf herrings, etc. The size is generally quite small, typically under 5 kg (11 lb). Many of these smaller fish make good bait when trolling for larger species.



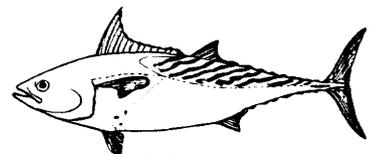
Double-lined mackerel



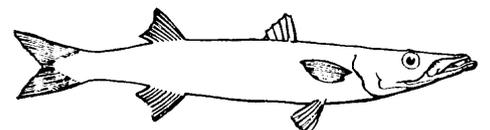
Groupers



Trevallies



Mackerel tuna

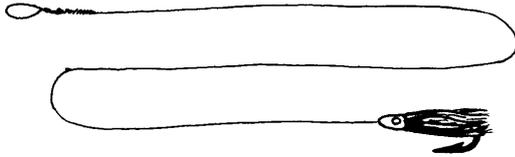


Seapike

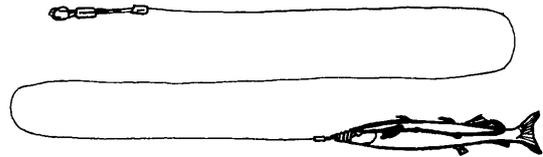
Gear

Because of the generally smaller size of the fish, fairly light gear can be used for lagoon trolling. Small octopus or other types of lures, particularly Hashing spinners or spoons, are suitable, and these should be rigged on light wire (not nylon) traces. Natural baits can be used if you expect to catch Spanish mackerel or other large fish. Otherwise, they are probably not worth using, because there is a good chance that the fish you catch may not be very much larger than your bait. As many fishermen rely on lagoon trolling to catch much of their bait for other types of fishing, they would obviously use lures in an attempt to save their bait.

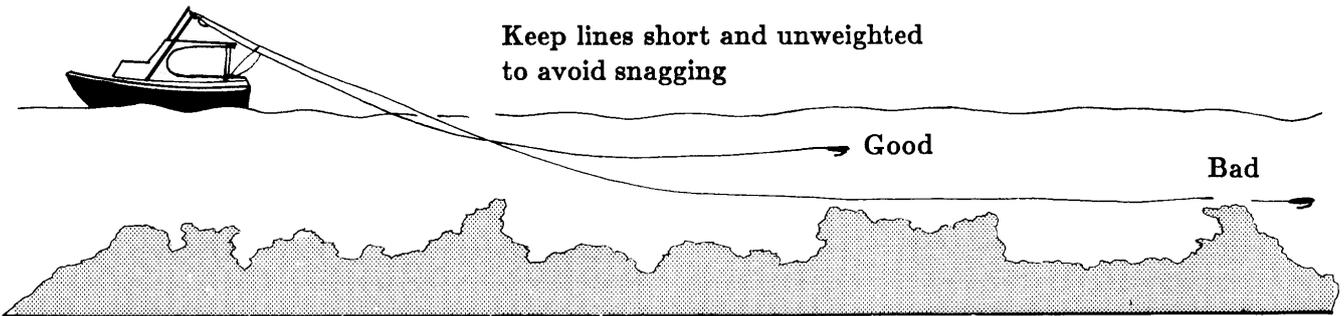
GEAR



Use small lures on light wire traces for general lagoon trolling



Use larger lures or baits on heavier wire or cable traces for Spanish mackerel



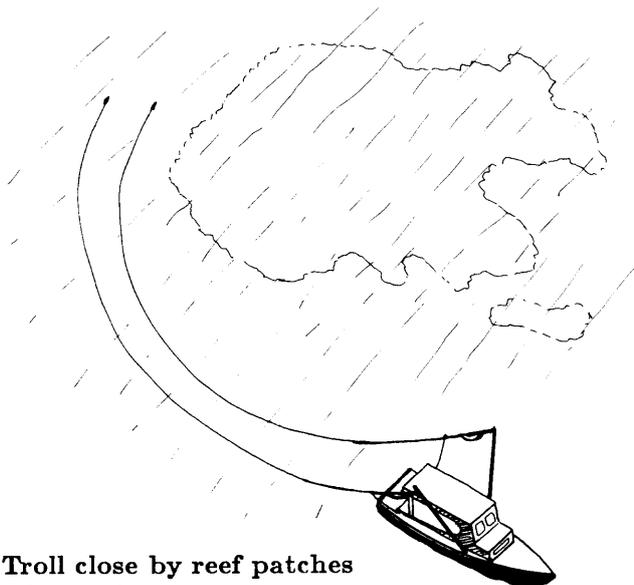
Keep lines short and unweighted to avoid snagging

Unless you know the area well, it is best to use unweighted lines to avoid the risk of hooking up on the bottom in areas where the lagoon may be shallow. For the same reason, lines should normally be kept fairly short -under 25 m (85 feet) so that they will not tangle if the boat has to turn sharply to avoid reefs or rocks.

REEF PATCHES

Reef patches

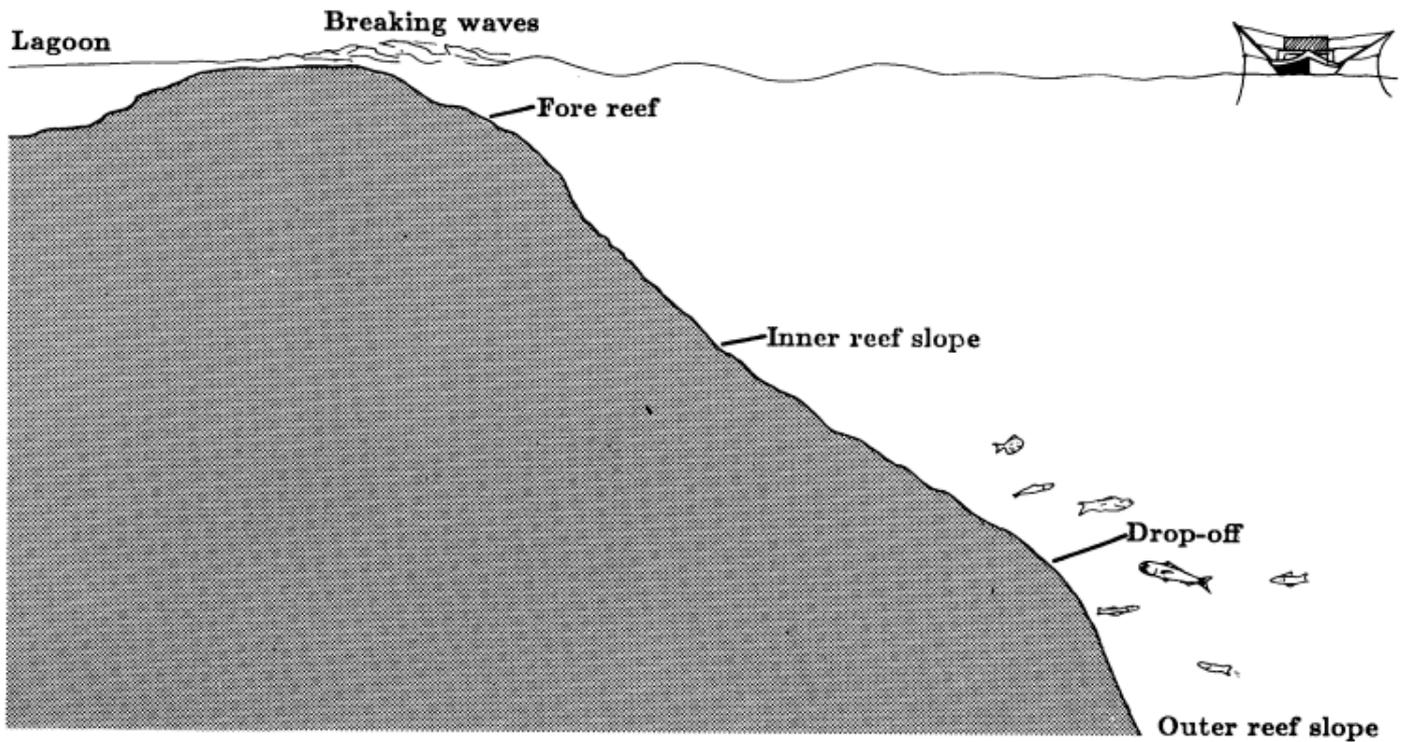
When lagoon trolling, make a point of passing reef patches or coral heads fairly closely where it is safe to do so. Many lagoon predators are somewhat territorial and will not stray too far from the coral patches which are their homes. Others are more wide-ranging but do much of their hunting around the patches where smaller fish often shelter. Hence, these tend to be good trolling areas and many strikes occur close to reef patches or outcrops. The windward side of a reef patch often produces more action than the lee side.



Troll close by reef patches when safe to do so

The waters just outside the outer barrier reef, or around offshore reef patches, are usually prime trolling grounds. These areas are the habitat of many predatory fish which feed on smaller reef-associated species, and grow to large adult sizes.

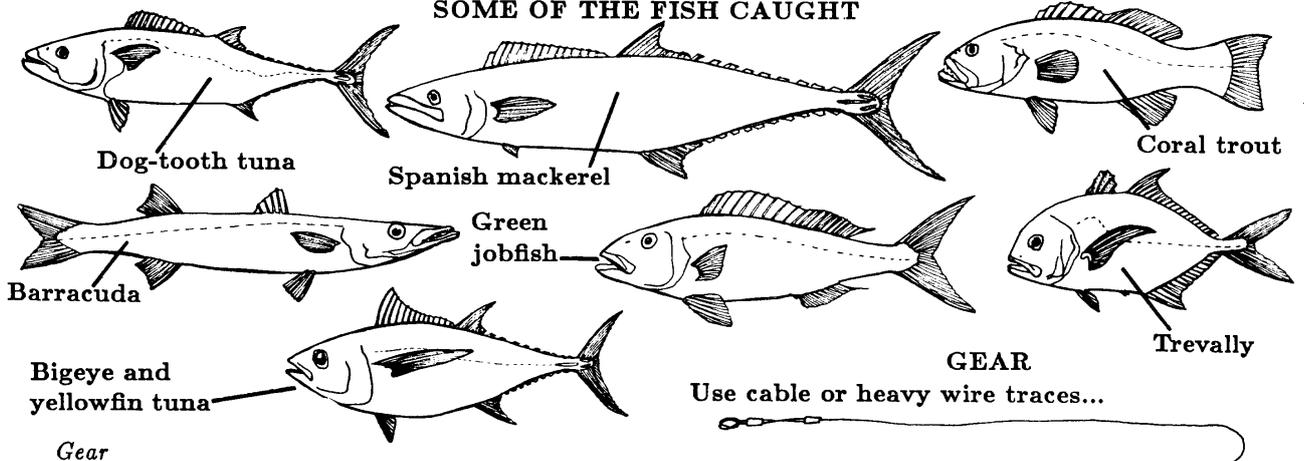
THE OUTER REEF ZONE



Species caught

The range of fish caught in this environment is variable, and includes the larger barracudas, yellowfin, bigeye and dogtooth tunas, trevallies, green jobfish, and coral trouts. In areas where they occur, Spanish mackerels will be caught in season, and are often larger individuals than those taken in the lagoon.

SOME OF THE FISH CAUGHT

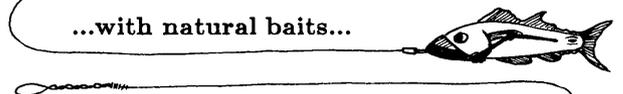


GEAR

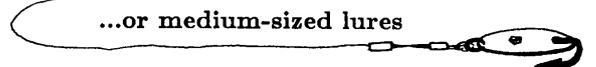
Use cable or heavy wire traces...



...with natural baits...



...or medium-sized lures



Sinkers may be useful for trolling drop-off



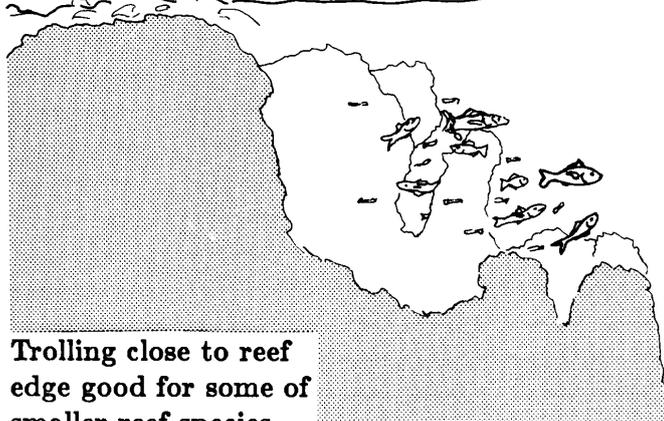
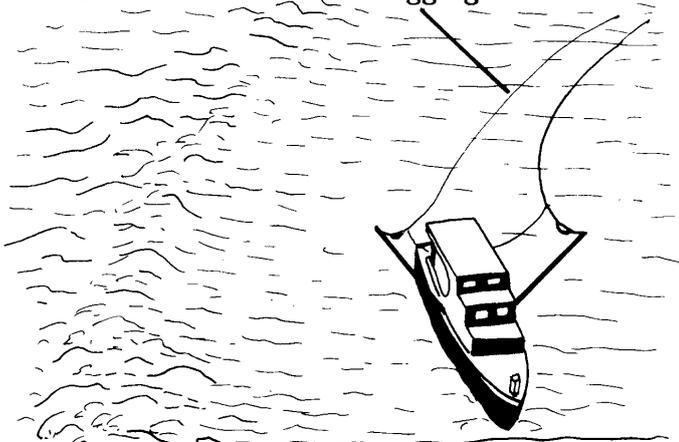
Because this area tends to produce good-sized fish (typically 5 to 50 kgs, or 11 to 55lbs), fairly heavy trolling gear should be used. This is a good area to troll at low speeds using natural baits, which should be rigged on cable or strong wire traces. Alternatively, fairly large-sized hard lures (spoons or Smiths jigs) or large octopus lures may be effective. Weighting the lines when trolling the drop off (see facing page) will often increase the number of strikes.

Passages

Passages, or breaks in the barrier reef, are usually good places to troll. The strong currents found in these areas attract feeding fish of many sorts, and it is usually worth making several passes through these areas, or circling around, in the hope of a strike.

THE REEF EDGE

Keep lines short and unweighted to avoid snagging



Trolling close to reef edge good for some of smaller reef species

The drop-off

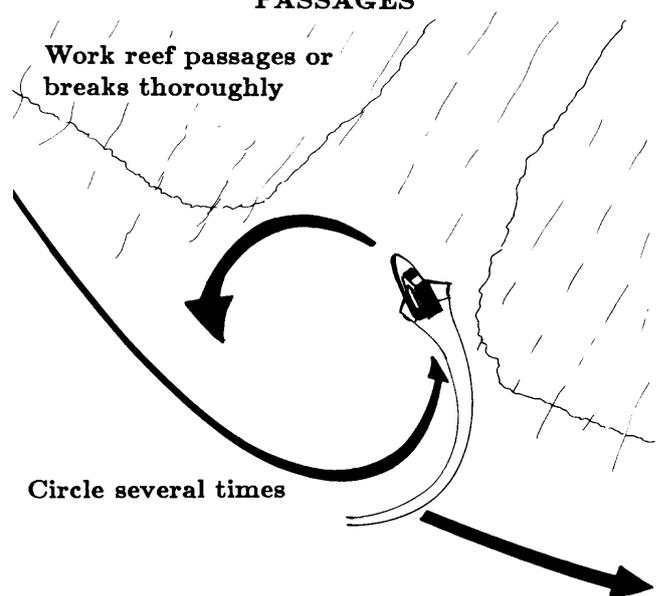
Another reef trolling technique is to follow the dropoff, which is where the reef starts to fall away very steeply, often at a depth of 25 to 50 metres (85 to 170 feet). This is a good area for Spanish mackerel, wahoo, and other large reef-associated fish.

If the bottom is not visible, the drop-off can usually be distinguished by the colour of the water: a green or milky blue above the drop-off, and a clearer or ocean blue beyond it. By keeping one colour on one side of the boat and one on the other, it is possible to troll the drop-off contour quite accurately.

Since less sudden manoeuvring is normally required in this zone, lines can be made longer and weights or diving devices used to troll deeper.

PASSAGES

Work reef passages or breaks thoroughly



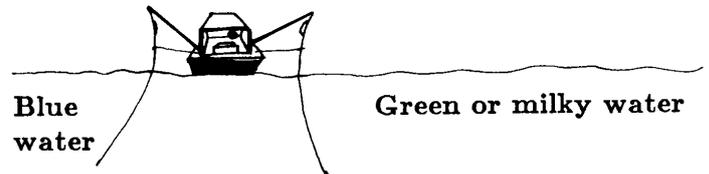
Circle several times

The reef edge

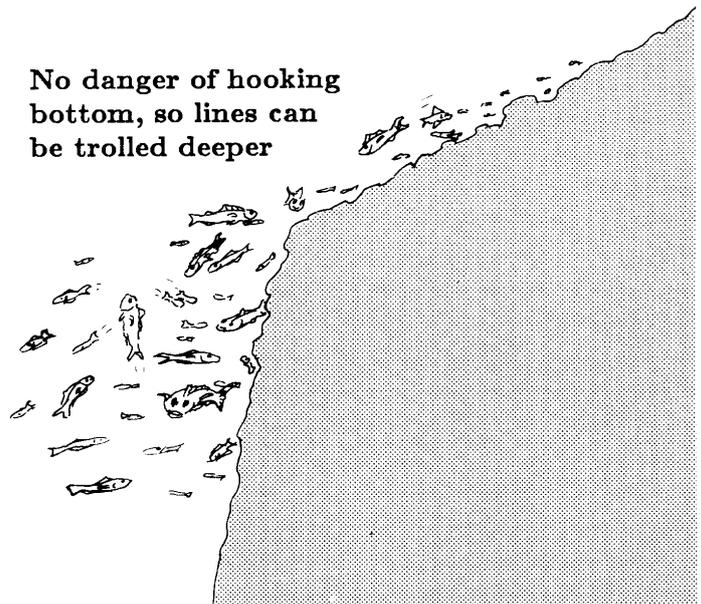
The face of the outer reef, or the line of breaking waves, is usually very distinct. Many fishermen like to troll parallel to it, at a safe distance, in water where the bottom is visible. This is a good area for catching smaller fish. Since there are often coral outcrops or cuts in this zone, the boat will need to manoeuvre quite a lot, so the lines should be kept fairly short, and should be unweighted to prevent tangles and hook ups on the sea bed.

THE DROP-OFF

If bottom cannot be seen use water colour to follow the drop-off

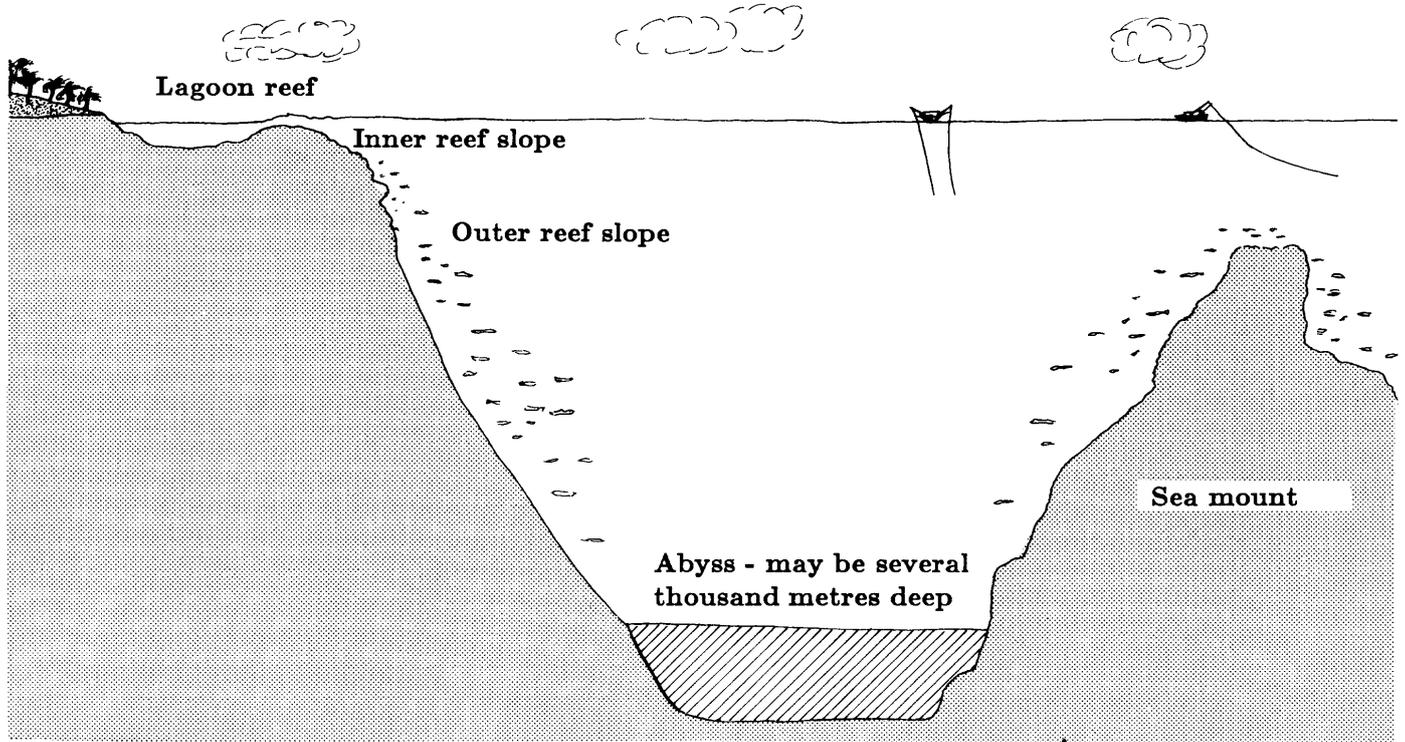


No danger of hooking bottom, so lines can be trolled deeper



The deep ocean waters some way off the outer reef are probably the most difficult trolling grounds. The fish tend to be thinly scattered and hard to locate, and seem more wary about striking the gear than many inshore species. However, many fish in this zone grow to enormous sizes, so a single fish can represent a good catch.

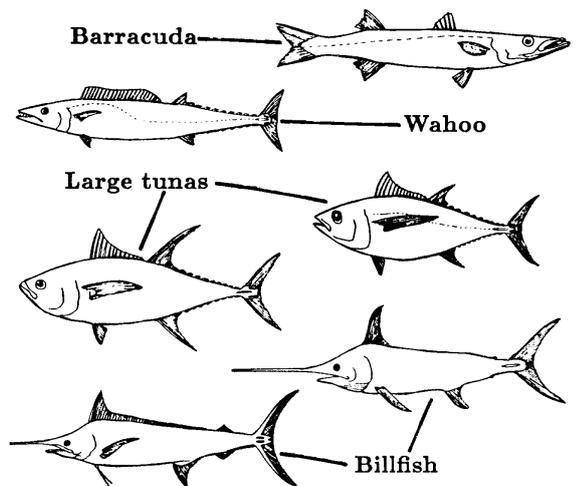
THE OPEN WATER ZONE



Species caught

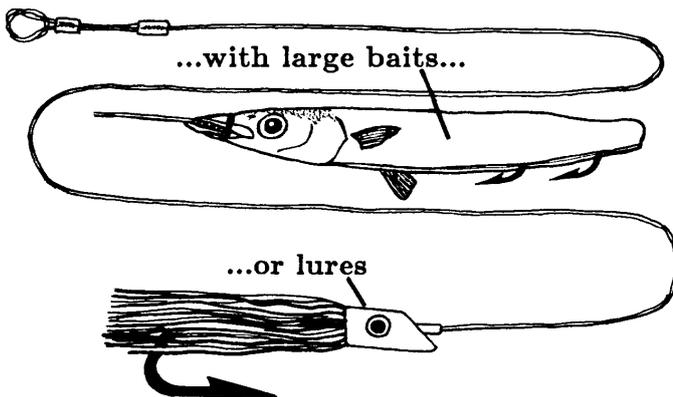
This zone produces the fish sought after by big game fishermen -marlins, swordfish and sailfish -as well as wahoo, large yellowfin and bigeye tunas, and the large oceanic barracuda. Many surface schooling species may also be caught, but these are dealt with in Section 5E.

SOME OF THE FISH CAUGHT

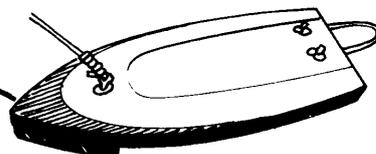


GEAR

Use heavy wire or cable traces...



Use diving boards for deep-trolling



Gear

Because of the possibility of hooking large fish, this is the place to use your heaviest trolling gear. Large lures or good-sized natural baits rigged on heavy cable traces are often successful. There are few obstacles to the use of long lines which can be weighted or fitted with diving devices to carry the lures down deep. Sub-surface or deep trolling can be very effective in this zone. Handreels are much better than fixed lines for open water trolling, as they allow the larger fish to be played.

Ocean currents

Open water trolling can be a frustrating experience as the fish may be thinly distributed and hard to locate. Trolling 100-200 metres (350-650 feet) outside the dropoff (see Section 5C) is a good starting point to trolling in more open water.

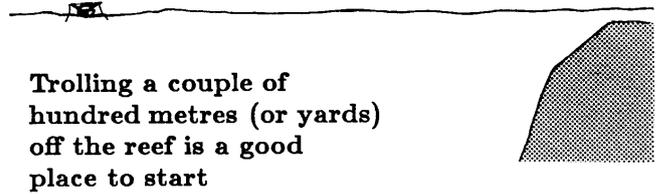
However, knowing local current patterns increases the fisherman's ability to select good fishing grounds. Currents have a major influence on the behaviour of ocean fish through their effects on water temperature and food availability. A knowledge of local current patterns greatly increases the fisherman's ability to select good fishing grounds.

Places where currents meet, or where obstructions cause upwelling or turbulence, are often areas of high food productivity which serve as feeding grounds for ocean fish. Pronounced points on reefs often interrupt coastal currents, again creating conditions of upwelling where fish will often congregate. Likewise, underwater seamounts which rise sharply from the deep ocean floor cause current obstructions and have the same effect.

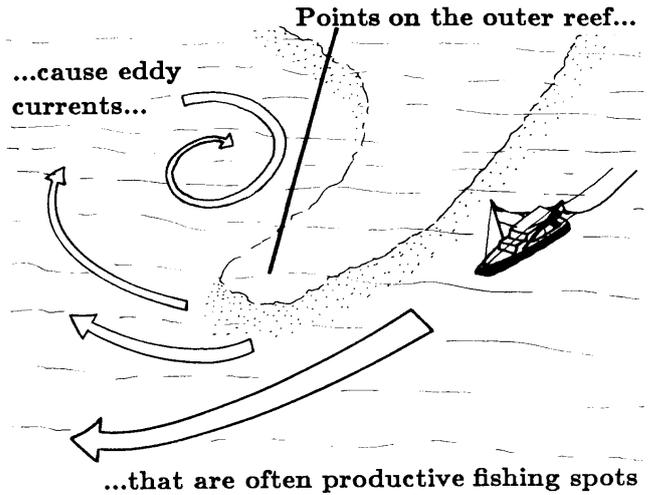
Ocean areas outside reef passages can also be good fishing spots, especially at times of spring tides when tidal currents through the passage are at their strongest.

Many types of fish are thought to swim against a current, so that they are constantly warned of what lies in their path by the odours and sounds that are carried towards them. Trolling with the current direction therefore increases the fisherman's chances of meeting more fish. After a strike, it may pay to reverse course and troll against the current in order to follow any fish that may have been travelling with the one that was caught.

OPEN WATER TROLLING

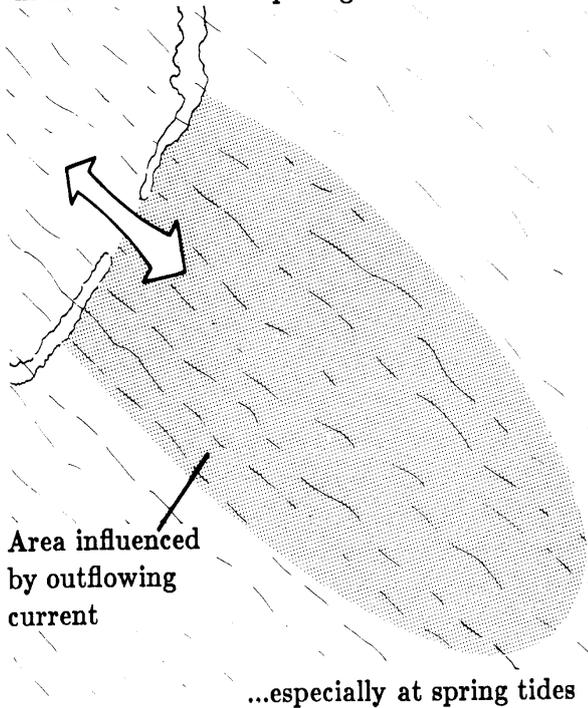


OCEAN CURRENTS

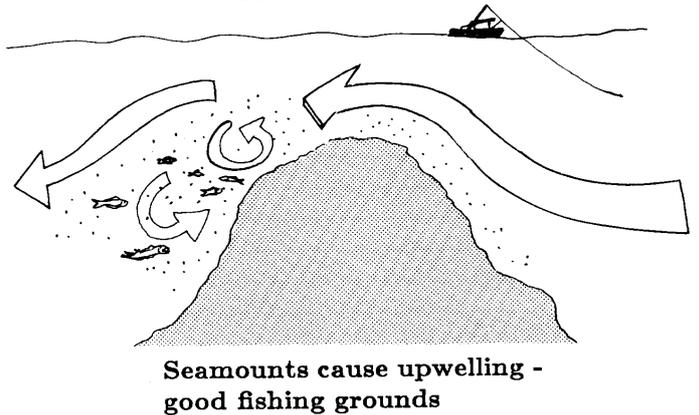


PASSAGES

Tidal currents lead to good fishing in areas outside reef passages...

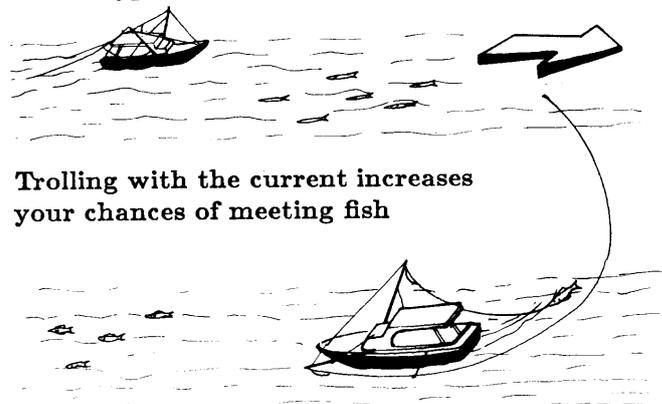


UPWELLING



FISH BEHAVIOUR

Some types of fish swim against the current

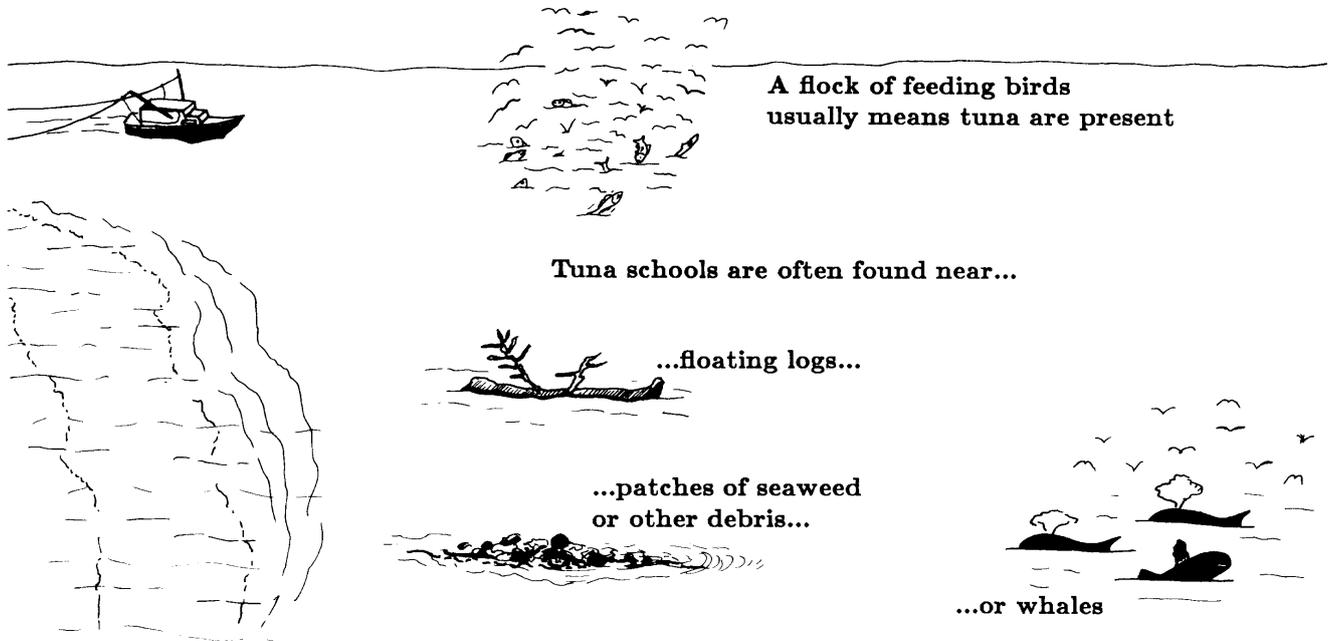


CHAPTER 5: TROLLING TECHNIQUE

SECTION E: TROLLING SURFACE TUNA SCHOOLS

Surface tuna schools are feeding aggregations of fish that occur within several miles of the coast in all Pacific Island countries for at least part of the year. They are usually, but not always, accompanied by *flocks* of seabirds which dive on the small bait fish driven to the surface by the feeding tuna. Schools may also be found in association with drifting logs, basking whales, or other floating objects. Trolling these schools is a specialist technique in its own right, as is the traditional Pacific Island fishing method of pole-trolling, which is described in Appendix 1.

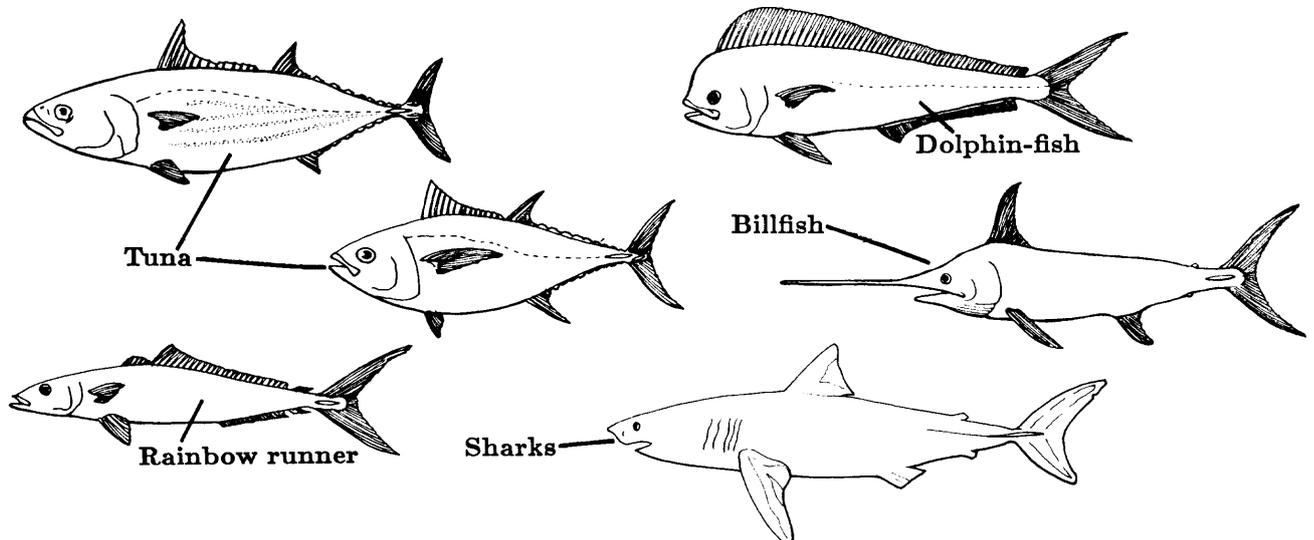
LOCATING SURFACE TUNA SCHOOLS



Locating a school

Schools are often located visually by searching for the flocks of birds usually associated with them. Other ways include searching for floating objects, (logs, patches of weed, and even whales) with which tuna schools are often associated, or checking locations where schools have been seen on previous days or weeks. Many schools can be found in the same location on successive days, or in places of favourable currents or other ocean features which regularly seem to attract them.

SOME OF THE SPECIES CAUGHT



Caught

The schools contain varying proportions of skipjack, juvenile yellowfin and bigeye tunas, and associated species such as mahimahi and rainbow runner. The average size of the school fish is generally under 10 kg (22lb) and often under 5kg (11lb), but schools of much larger yellowfin occur from time to time. Small numbers of larger tunas are associated with many surface schools, often swimming deeper in the water than the main body of the school. A few large predators such as billfish and sharks are also usually associated with each school.

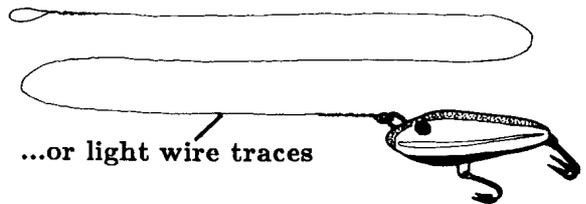
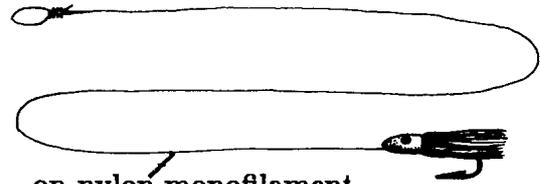
Gear

School tunas are usually of fairly small size so relatively light gear can be used. Since tunas are more or less toothless, nylon monofilament traces of 30 to 40 kg (65-90 lb) breaking strain can be used. These are preferred to wire or cable as tunas have very good eyesight and may be put off by a more visible trace.

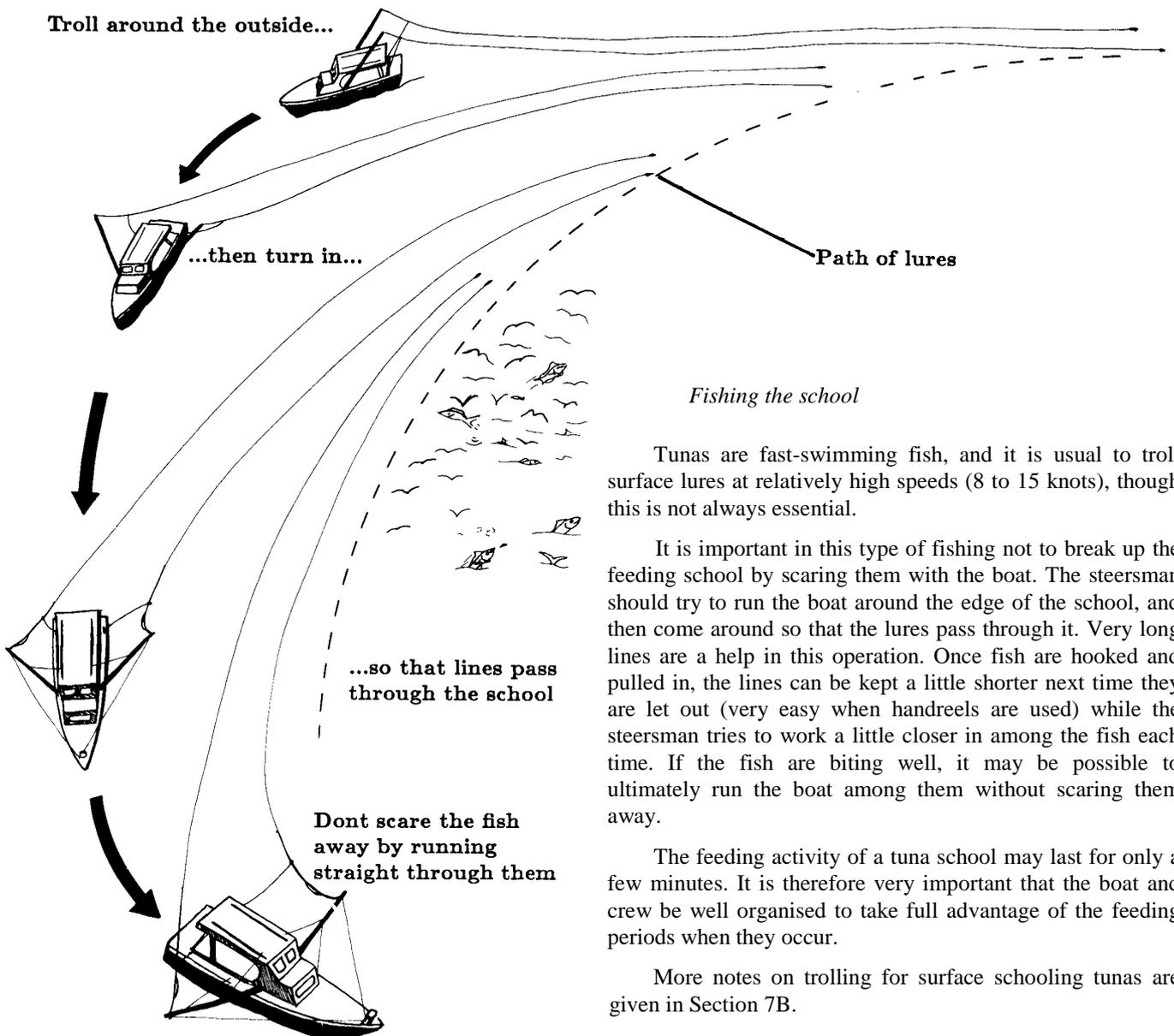
Small octopus lures work very well in tuna schools, even when larger fish are present. Other types of small lure are also suitable. Natural baits are not generally used for this type of surface fishing, but can profitably be towed on a deeper line to pick up a larger, deeper swimming fish.

GEAR

Use small to medium size lures...



FISHING THE SCHOOL



Tunas are fast-swimming fish, and it is usual to troll surface lures at relatively high speeds (8 to 15 knots), though this is not always essential.

It is important in this type of fishing not to break up the feeding school by scaring them with the boat. The steersman should try to run the boat around the edge of the school, and then come around so that the lures pass through it. Very long lines are a help in this operation. Once fish are hooked and pulled in, the lines can be kept a little shorter next time they are let out (very easy when handreels are used) while the steersman tries to work a little closer in among the fish each time. If the fish are biting well, it may be possible to ultimately run the boat among them without scaring them away.

The feeding activity of a tuna school may last for only a few minutes. It is therefore very important that the boat and crew be well organised to take full advantage of the feeding periods when they occur.

More notes on trolling for surface schooling tunas are given in Section 7B.

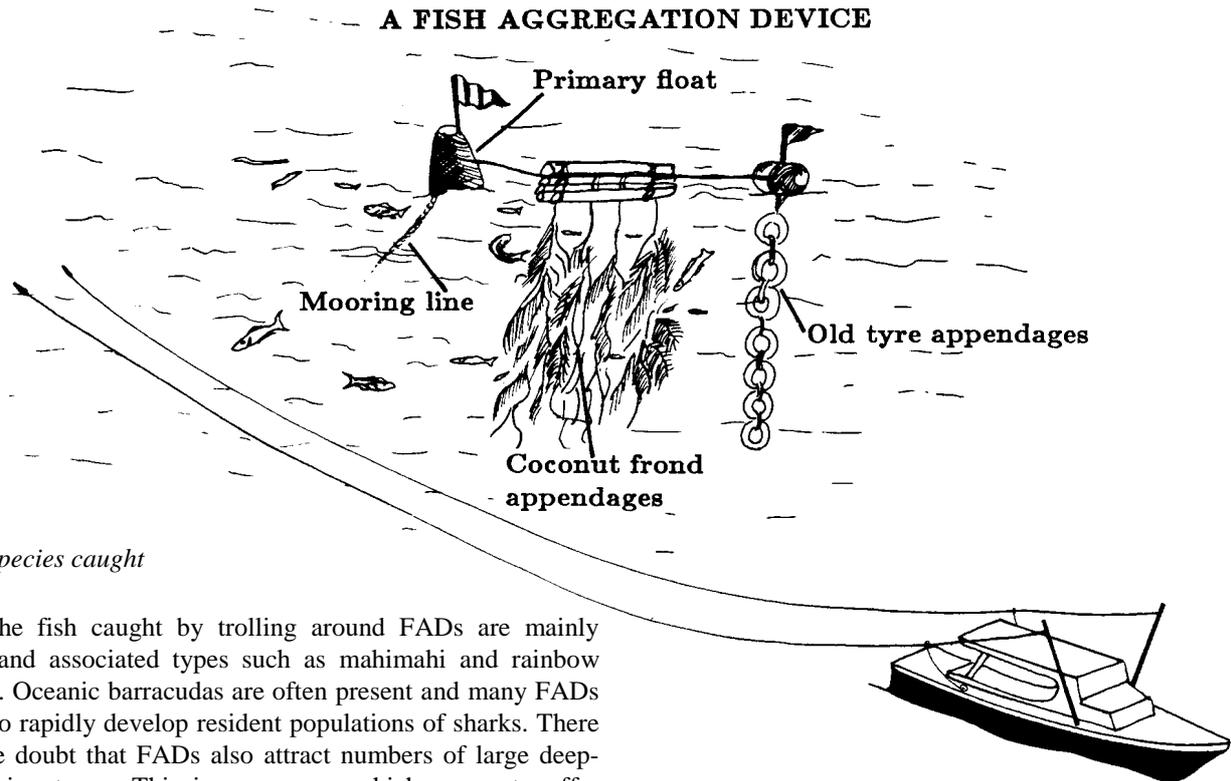
CHAPTER 5: TROLLING TECHNIQUE

SECTION F: TROLLING AROUND FISH AGGREGATION DEVICES

Fish aggregation devices (FADs) are a man-made alternative to the natural floating objects around which tuna schools are often found. Foam-filled oil drums or other objects are anchored in a known location in the hope that tuna schools will gather around them for the same reasons they gather around other floating objects -whatever those reasons may be.

FADs are not always 100 per cent effective, and have a tendency to disappear if the raft or mooring rope is damaged by bad weather, vandalism, or fish bite. Those which do work, however, provide many advantages to the small-scale fisherman. He spends less time and fuel in searching for fish, and the fact that his fishing location is known to those who might have to search for him in the event of a breakdown adds an important safety factor.

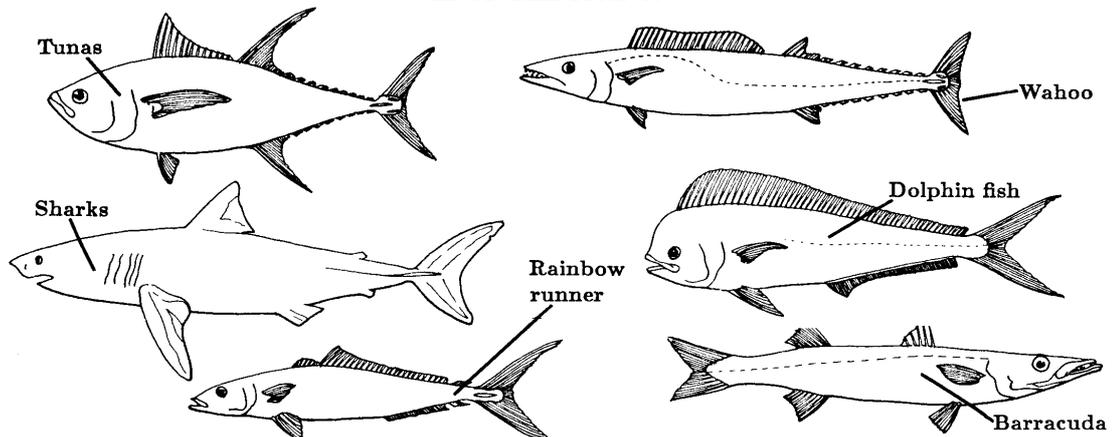
There are also some disadvantages to FADs, the main one being that a lot of fishermen may go out to fish the FAD at the same time, causing competition and interference in each other's fishing.



Species caught

The fish caught by trolling around FADs are mainly tunas and associated types such as mahimahi and rainbow runner. Oceanic barracudas are often present and many FADs seem to rapidly develop resident populations of sharks. There is little doubt that FADs also attract numbers of large deep-swimming tunas. This is a resource which seems to offer potential for development by deepwater trolling and other fishing methods. At present, however, little is known about the most suitable trolling techniques for these deep-swimming fish.

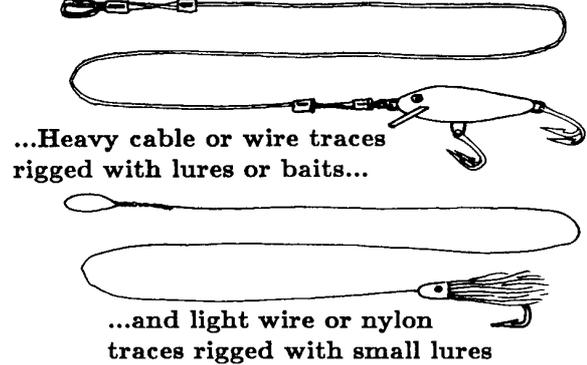
SOME OF THE FISH CAUGHT



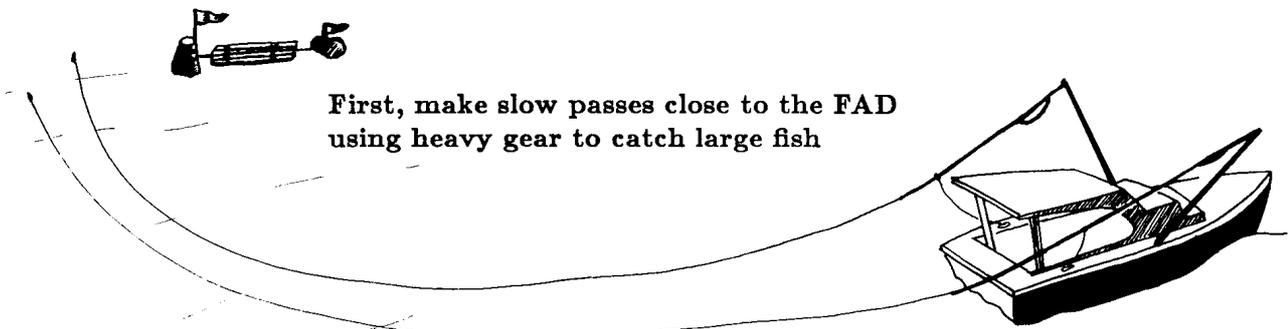
Gear

FAD fishing incorporates elements of both ocean or deep-water trolling (Section 5D), and trolling surface tuna schools (Section 5E). It is therefore necessary to be prepared for both these types of fishing -that is to have on board both heavy duty lines rigged with large lures or baits, and lighter lines rigged with small octopus or other lures. It will probably be necessary to change between one type of gear and the other during fishing.

Be prepared to use... GEAR

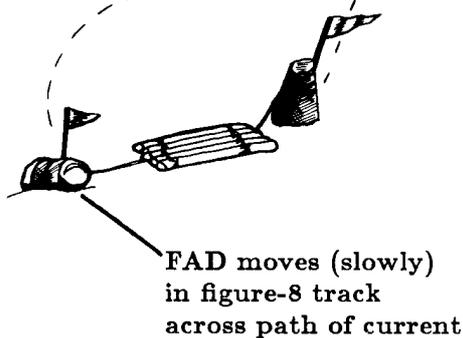
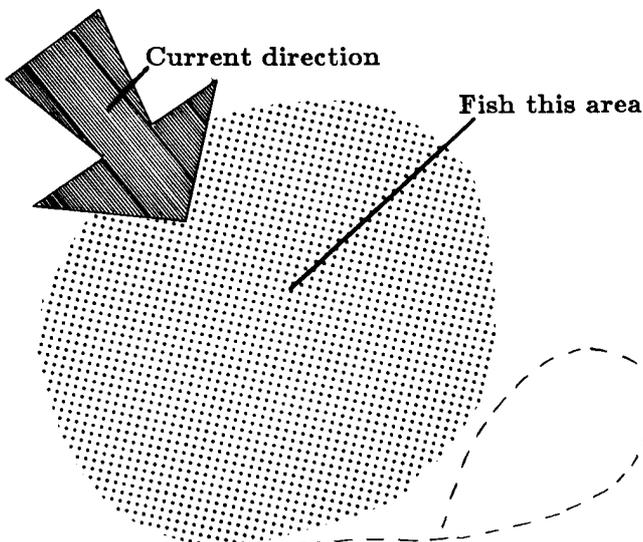


FISHING THE FAD



Then move further away and fish up-current side using lighter gear

Fishing

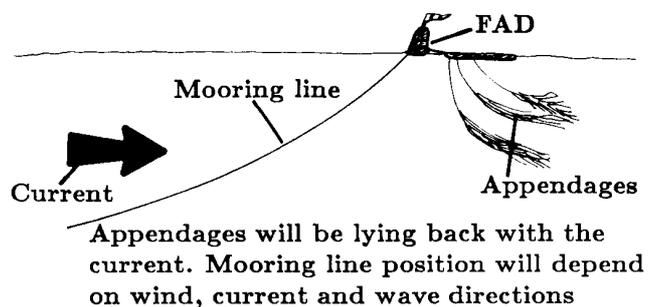


Having located the FAD, it usually pays to make the first approaches trolling fairly slowly, using heavier gear and passing as close to the FAD as possible without hooking it. Mahimahi, barracuda, and sometimes large yellowfin are often the first fish to hit, and the first to go off the bite. When this happens, change over to lighter lines and smaller lures, trolling a little faster for the smaller tunas. It may ultimately be necessary to change to monofilament traces if the fish are not biting eagerly.

A consistent feature observed by FAD fishermen is that the majority of fish caught around FADs are taken on the up-current side. It is therefore probably worthwhile to devote more time to trolling in this area. To tell which side is up-current, pass close to the FAD to see which way the anchor rope or appendages are lying.

Flocks of birds may be feeding around the FAD, and these usually indicate tuna schools feeding on the same spot. Fishing for these is exactly as described in Section 5E.

TO CHECK CURRENT DIRECTION

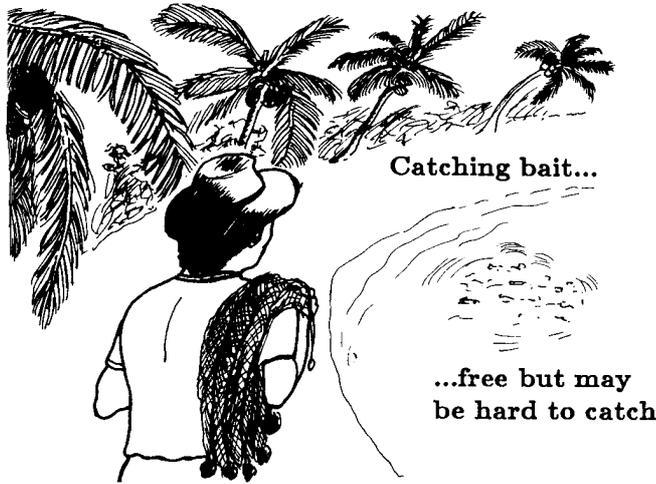


CHAPTER 5: TROLLING TECHNIQUE

SECTION G: SELECTING THE RIGHT BAITS AND LURES

In choosing his lures and baits, the fisherman's main aim is to select those he thinks are most likely to be attacked by the fish he wants to catch. However, in practice many other things will also affect the final choice.

NATURAL BAITS OR LURES



Local availability and cost

In many locations, the fisherman can use natural baits that he himself has caught. This costs him his time and labour but little or nothing in the way of cash. Alternatively he may be obliged to buy bait, thus adding considerably to his costs. Since bait availability tends to be variable, he may also have to store them (by freezing or salting) during times of abundance, further adding to his operating costs.

Artificial lures, on the other hand, require no special storage, and, although they sometimes appear very expensive to buy, they usually work out cheaper in the long run because they can be re-used. Unfortunately, in many Pacific Island locations, only a limited range of lures is available, and replacement hooks, skirts, etc. may be very difficult to obtain.

In practice, all this often means is that the fisherman uses natural baits when he can catch them himself, and artificial lures at other times.

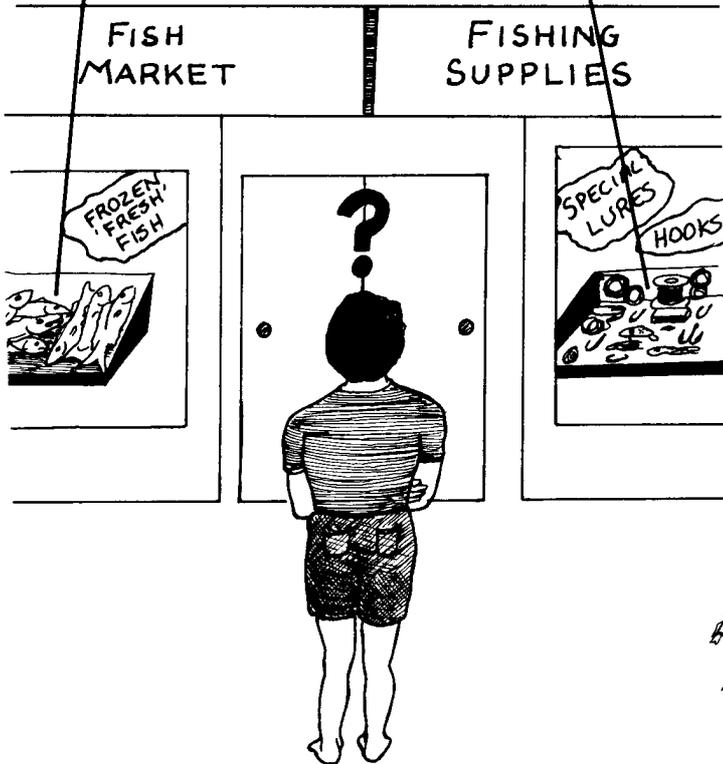
In rural areas lures not available so no choice

Baits – usually work better, but they are perishable and slower to rig

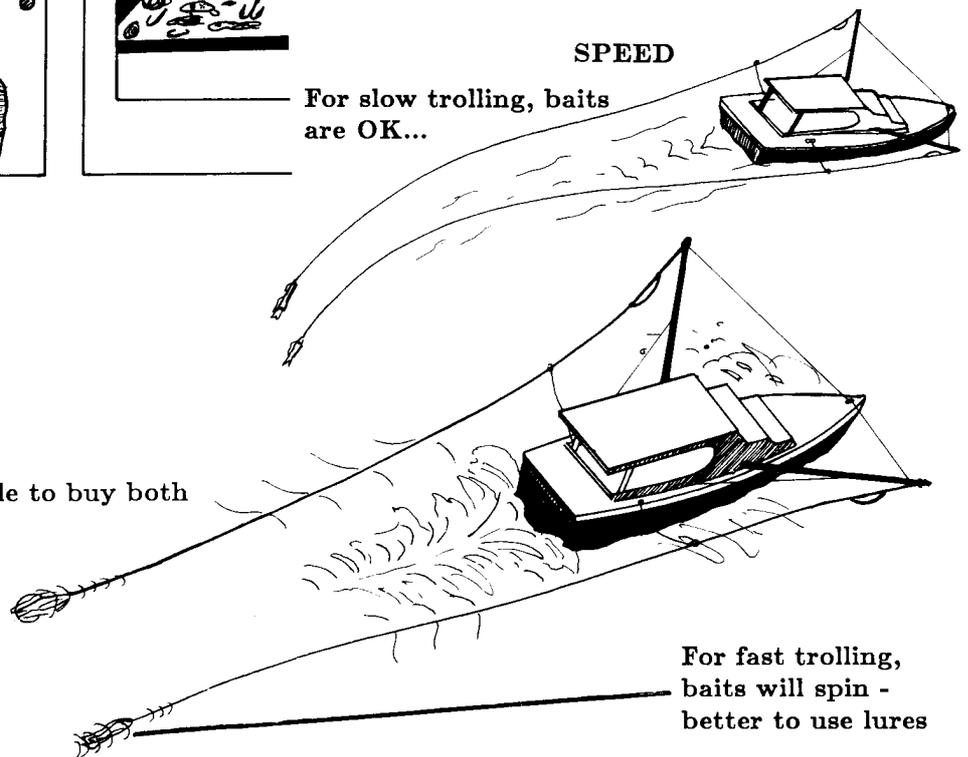
Lures – more durable and only have to be rigged once, but may be less effective

Trolling speed

Most natural baits do not tow well at speed of more than 5 knots. On the other hand, many artificial lures can be towed much faster than this provided that the lines are weighted to keep the lures below the surface and stop them skipping. A few types, such as Kona lures and some diving lures, are designed to be towed at speeds of up to 20 knots. See Section 5K for more comments on trolling speed.



In town areas, may be able to buy both



For slow trolling, baits are OK...

For fast trolling, baits will spin - better to use lures

Effectiveness for the target species

Most fishermen agree that natural baits are generally more effective than artificallures, especially on days when the fish are not biting well. In areas where the fishing is heavy, fish rapidly become 'educated' and are less likely to be tricked by an artificial lure. Larger fish tend to be more wary of lures than their younger brothers.

WHERE FISHING IS LIGHT

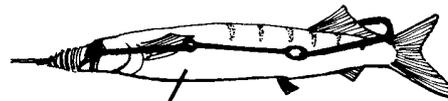
...and not many boats go trolling...



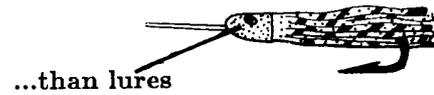
...lures will be OK

WHERE FISHING IS HEAVY

...and many boats go trolling...



...baits usually better...

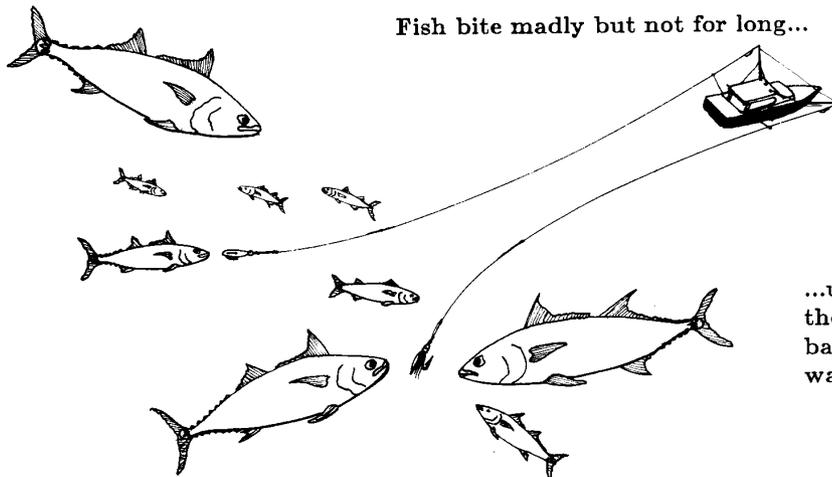


...than lures

However, when the fish are biting well, artificial lures will often out-fish natural baits. This is especially true when trolling on an actively feeding school of fish, which will snap at almost anything vaguely resembling the baitfish they are eating. In this case, using lures enables the lines to be got back into the water quickly after unhooking a fish. This type of frenzied feeding activity often lasts for just a few minutes, so the lines must be got back into the water as quickly as possible.

FISHING ON TUNA SCHOOLS

Fish bite madly but not for long...



...use lures so they can be got back into the water quickly

CHAPTER 5: TROLLING TECHNIQUE

SECTION H: SELECTING THE RIGHT LINE

No combination of line materials is universally suitable for all trolling situations. The ultimate choice of which materials are used will depend on many factors, some of which are discussed here.

Availability and cost

Some materials may not be locally available, while others may be too expensive to justify their use. This is particularly true of braidlines, and of several types of cable, for which the fisherman also needs sleeves and crimping pliers to make joints. Nevertheless, choose carefully as buying good-quality gear can be an investment which will increase your catch and earnings.

Strength

Always make sure the line is strong enough. The resistance of the bait, plus the drag of the line itself in the water, can add up to a considerable force, especially when trolling at high speeds or when the line is long. The additional impact of a heavy fish striking at high speed against the direction of the pull can easily result in a broken line or straightened hooks.

AVAILABILITY AND COST

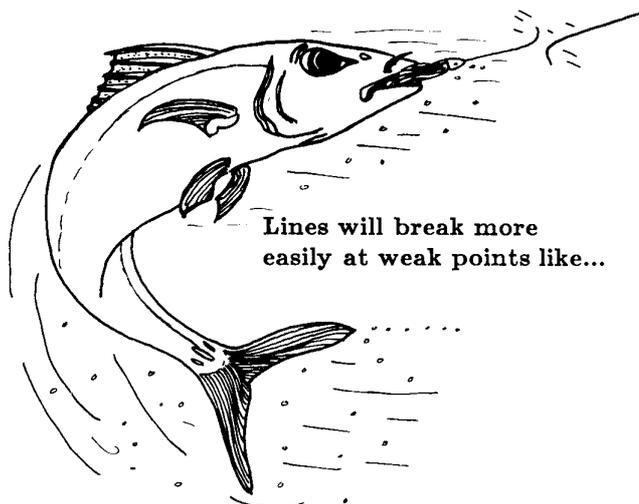


LINE STRENGTH

Fast trolling a large lure on a long line...



...produces a very heavy pull. The weight of a striking fish may break the line



... so use oversize main lines when possible. Never use line less than 50kg breaking strain

Nylon monofilament or other types of non-metallic lines can be used for traces when trolling specifically for tuna. When catching other species, many of which have sharp teeth, wire or cable should be used to avoid the risk of the trace being cut.

Breakage will usually occur at a knot, which can reduce the line strength by 25 to 50%, or at another weak point - a bend, kink, rust spot or wear point.

For these reasons, use oversized mainlines wherever practical. Stick to a minimum of 50 kg (110 lb) breaking strain and always use shock absorbers on fixed lines (see Section 3L).

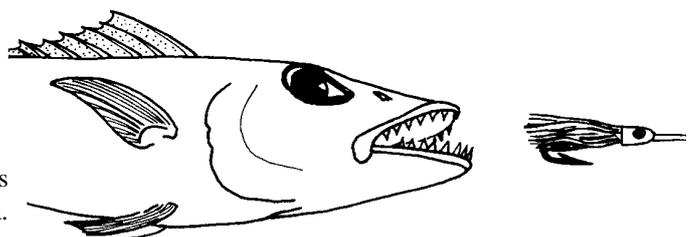
...knots...

...kinks...

...wear points...

TRACES

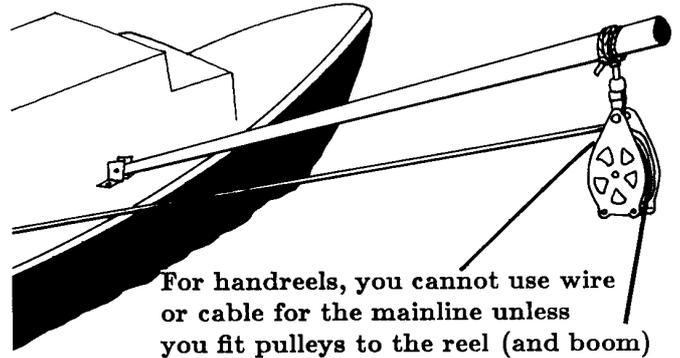
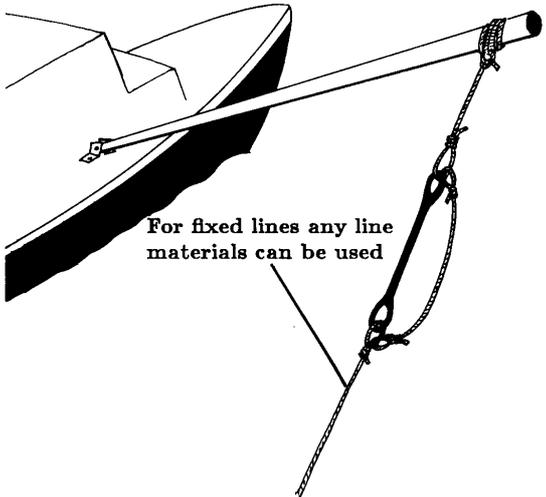
Use wire or cable traces for fish with teeth



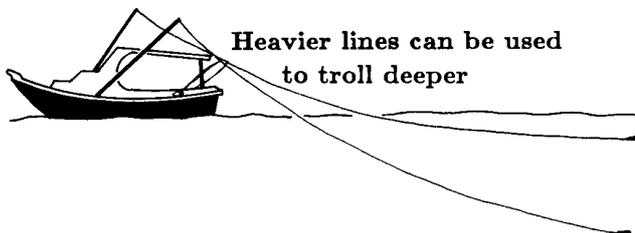
Vessel considerations

If you troll using fixed lines (Section 31), most of the line materials available would be suitable for use in the mainline. However, if using handreels (Sections 3M and 3N), wires and cables will generally not be suitable as mainline materials, unless you modify the reels (and trolling booms, when necessary) by incorporating large diameter pulleys as line guides (see sections 2D and 2G).

VESSEL CONSIDERATIONS



TROLLING DEPTH



Trolling depth

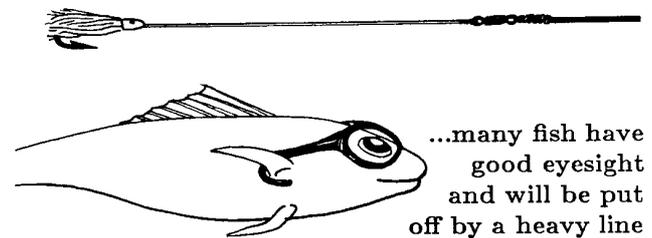
To some degree, line materials can be used to alter the depth at which the lure is trolled, as shown in Sections 3J and 3K. At the same trolling speed and line length, the denser the mainline material, the deeper the line will fish. See Section 51 for more comments on trolling depth.

Detection by the fish

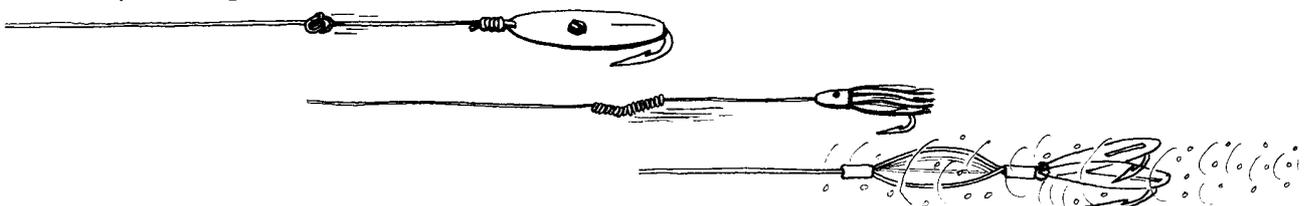
In general, the more visible the line is, the more likely it is to deter the fish from attacking the bait. Badly made knots, splices or crimped joints will cause turbulence which will divert the attention of the fish and warn him that there is something unusual about the bait. This consideration is much more important in areas of heavy fishing, where the fish are more wary, than in areas where fishing is light. It is also more important when trolling in clear waters for fish with very acute eyesight (e.g., tunas) than it is when fishing in clear coastal or lagoon areas.

LINE VISIBILITY

Lines should be as 'invisible' as possible...



Badly made knots and joints may put off the fish by causing turbulence...



...or may unbalance the action of the lure

CHAPTER 5: TROLLING TECHNIQUE

SECTION I: LINE LENGTH AND DEPTH

As with the selection of gear (sections 5G and 5H) and of trolling speed (Section 5K), the final choice of line length and trolling depth depends on a number of things.

Line length

It is generally accepted that the bait should be trolled well back from the boat so that engine noise or the turbulence from the boat's wake will not disturb the fish. 30 -50 metres (100 -165 feet) is a good average line length, with many fishermen preferring much greater lengths, up to 150 metres (500 feet). However, there is no doubt that strikes will often occur right behind the boat, especially when hauling lures in. This is a characteristic of certain species of fish (e.g. Spanish mackerel and dolphin fish) or happens at times of very frenzied feeding activity.

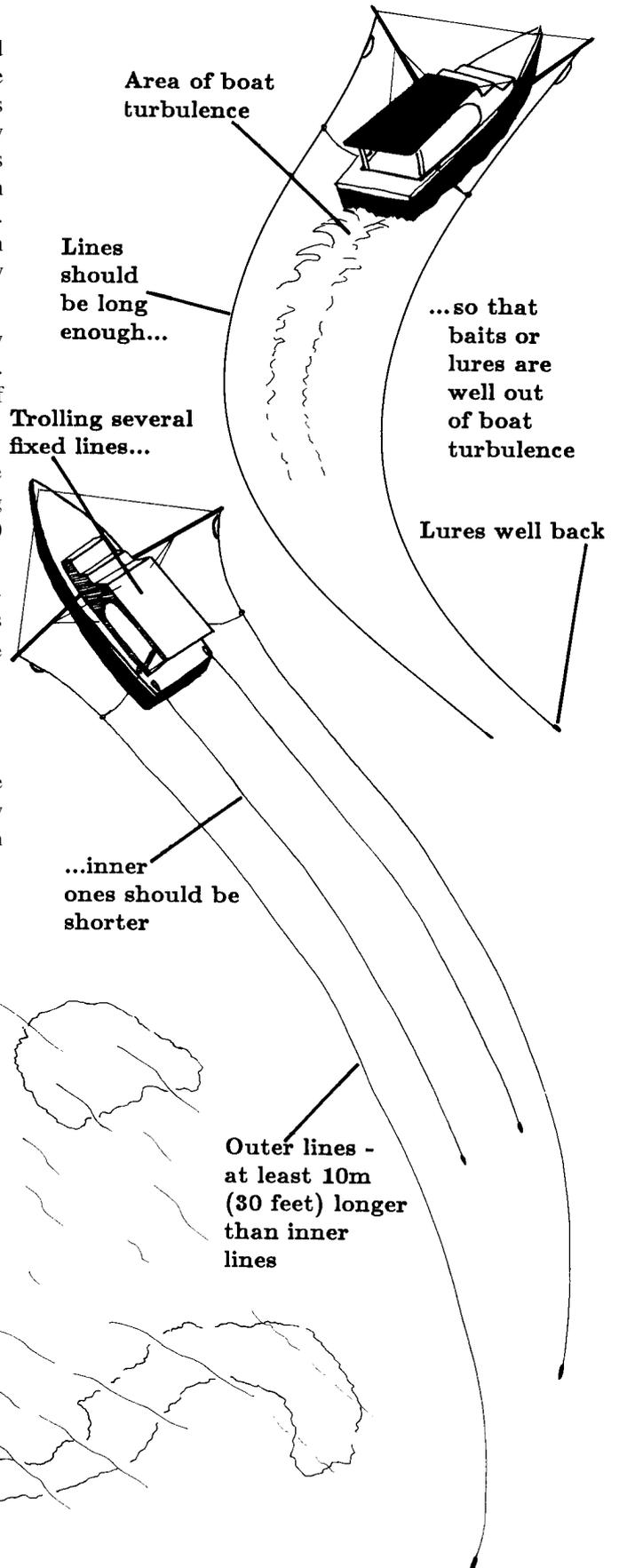
In reef bound areas, where the boat is constantly manoeuvring, long lines can become tangled with each other. In this case, they should be kept short, down to a minimum of about 15 metres (50 feet).

If several fixed lines are being trolled, those on the outside need to be longer so that they can be hauled in without tangling on the inner lines. An outer line should be at least 10 metres (30 feet) longer than its inner neighbour.

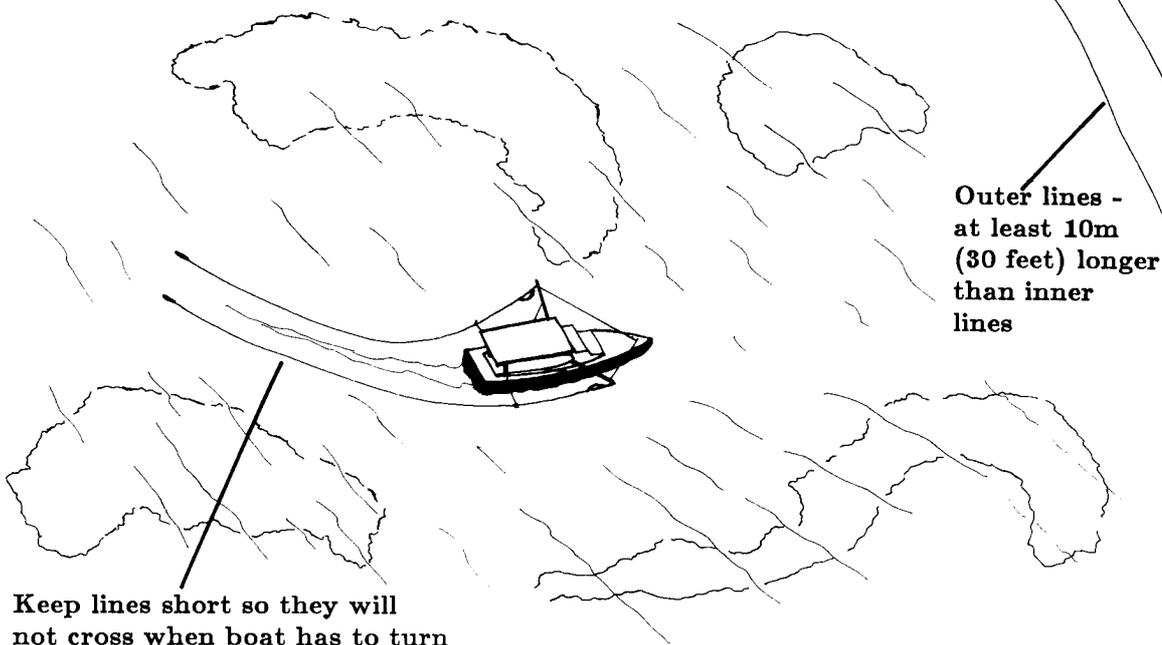
If using handreels, adjust the line length as conditions dictate. With fixed lines, the lengths have to be decided in advance, so it is important to take account of the likely fishing conditions at this stage or to make up a number of lines of different lengths.

There is no rule that says that baits or lures have to remain the same distance from the boat throughout the day. If strikes are few and far between, try varying the distance until you find an arrangement that works.

LINE LENGTH



TROLLING IN REEFY AREAS

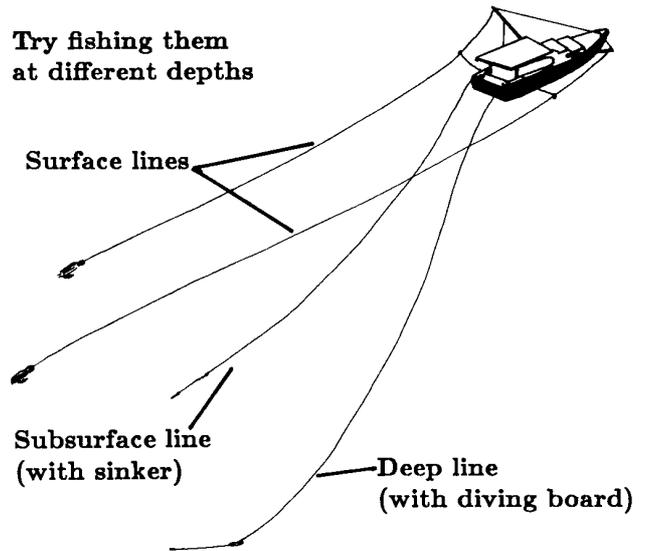


Trolling depth

When several lines are being towed, there is a good chance of them becoming tangled on a turn or when a fish strikes, especially if the lines are long. This problem can be partly avoided by rigging the lures to troll at different depths, thus reducing the chances of them interfering with each other. The inner lines should be arranged to fish deepest, by using weights or diving systems, such as those described in Sections 3J and 3K. The outer lines should troll at the surface, and, should be longer than the inner lines.

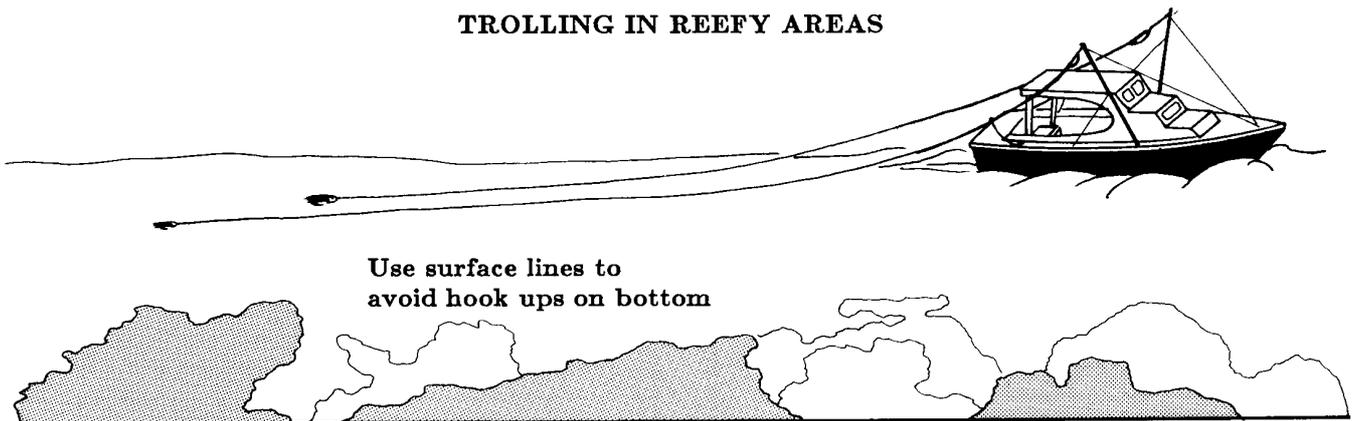
TROLLING SEVERAL LINES

Try fishing them at different depths



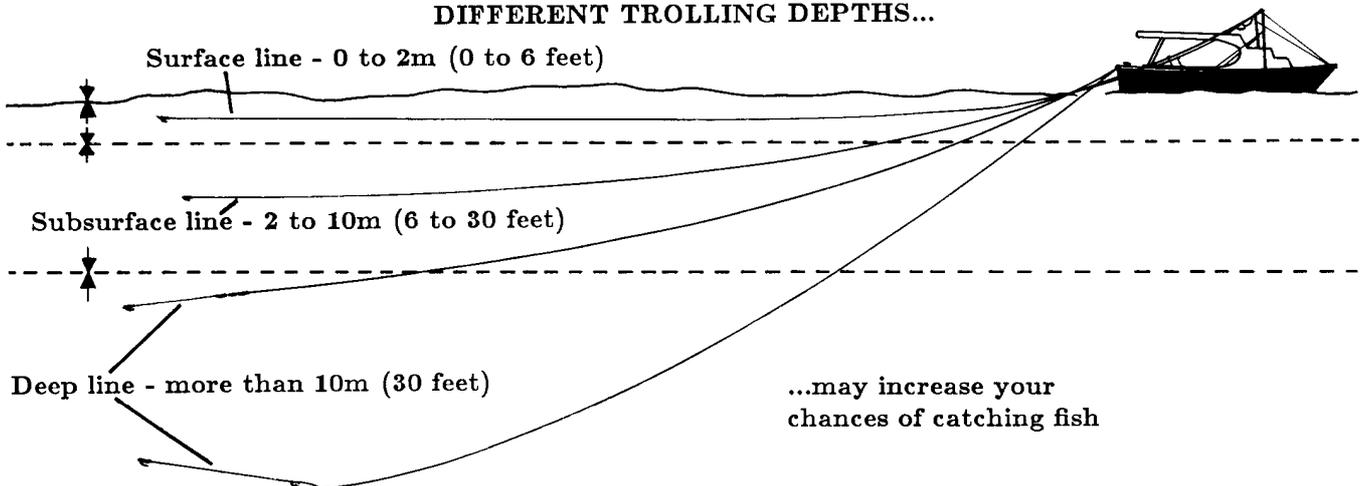
When trolling in shallow water or in areas where reef heads and patches are numerous, baits and lures trolled at any depth stand a good chance of hooking up on rocks or coral. Lines should therefore be trolled at the surface in these areas.

TROLLING IN REEFY AREAS



Adjusting the depth of the bait or lure increases its chances of being seen and attacked by different fish species. Larger, deep-swimming tunas can be taken by deep (more than 10 metres, or about 30 feet) or sub-surface (2 to 10 metres, or 6 to 30 feet) trolling. Reef-associated pelagic species will normally be caught on surface (less than 2 metres, or about 6 feet) and sub-surface lures. For trolling in the lagoon or on open-water tuna schools, surface lures are often the most effective.

DIFFERENT TROLLING DEPTHS...



CHAPTER 5: TROLLING TECHNIQUE

SECTION J: TROLLING TIMES

The season of the year, moon phase and tides, and the time of day all have significant effects on trolling success.

Season

The season affects the abundance of migratory fish species, such as tunas and other oceanic species, and Spanish mackerels. In cooler countries these fish only appear during the warmer part of the year, for periods of a few months. Trolling for these species is much better during these periods than at other times of the year.

Day and night

Many fish follow a regular daily feeding pattern of feeding activity, usually feeding more intensively early in the morning, showing a declining interest in food during the day, but feeding again late in the afternoon or evening. Many reef or lagoon species, and some of the larger tunas, continue to feed through the night. For most fishermen, night-time trolling is too dangerous to be feasible, although there is some evidence that trolling on bright moonlight nights using reflective or luminous lures can be successful.

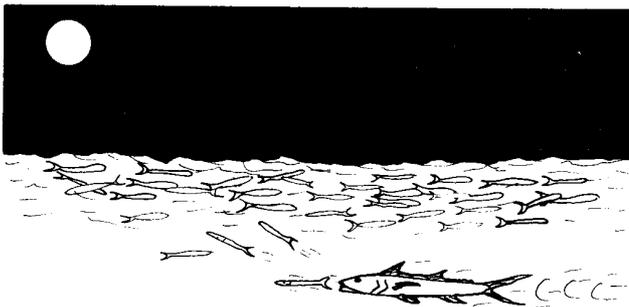
Tides and moon phase

The 'normal' day/night feeding pattern is modified extensively by the tides. When rising or high tides occur at dawn or dusk, trolling success will often be above average.

The moon phase affects fish abundance both by its effects on the tides, and because of the changing light conditions during the night as the moon waxes and wanes. Times of full or new moon, and the corresponding spring tides, are often periods of more active feeding among large predatory fish. Tidal currents are strongest at these times, and reef passages can be very good fishing grounds. Full moons draw many small, deep-living prey species to the sea surface at night-time, and this phenomenon tends to encourage the feeding activity of the types of fish normally caught by trolling.

MOONLIT NIGHTS

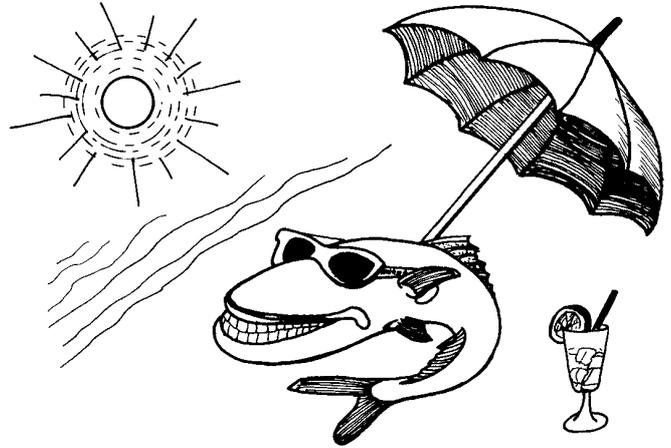
Light from full moon...



...draws baitfish to surface during night.
Improves trolling at dawn and dusk

SEASON

Many seasonal species...

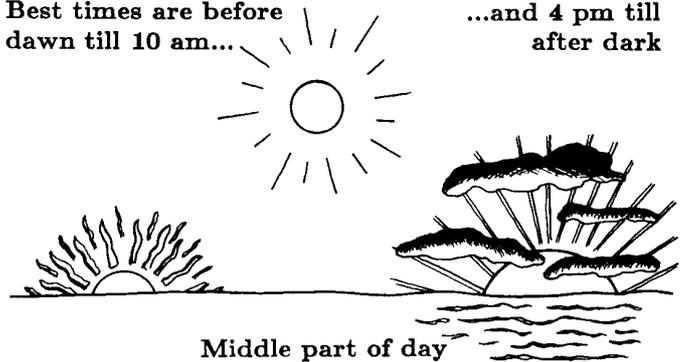


...only around in summer

TIME OF DAY

Best times are before dawn till 10 am...

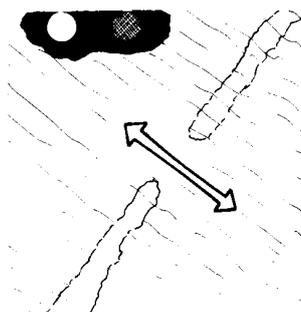
...and 4 pm till after dark



Middle part of day not usually very good

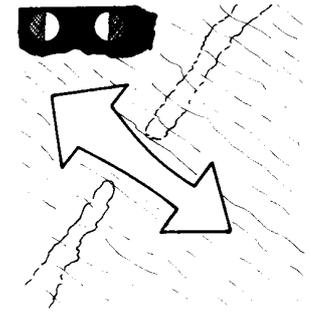
TIDES AND MOON PHASE

Full moon and new moon...



...strong tidal currents give good trolling

First and third quarters...



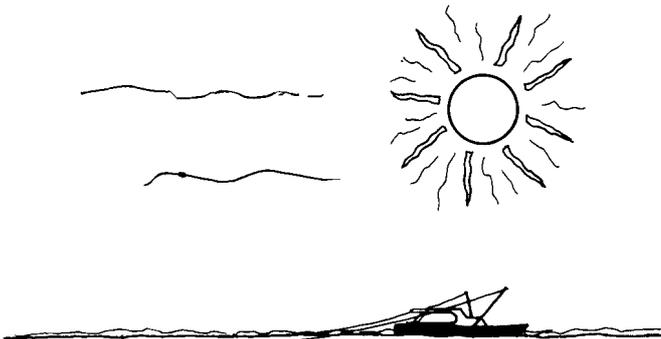
...weak tides, poorer trolling

Weather

Weather conditions affect both the fish and the fisherman. Clear, calm hot days can be good for trolling, and on these days the fisherman can use fairly small baits and lures, which the fish can see easily in the calm water. The best fishing days of all, however, are usually rainy and windy. At these times, use larger baits or lures that can be seen through the surface commotion.

WEATHER CONDITIONS

Clear, calm, hot days...



**...can be good for trolling.
Use small baits and lures**

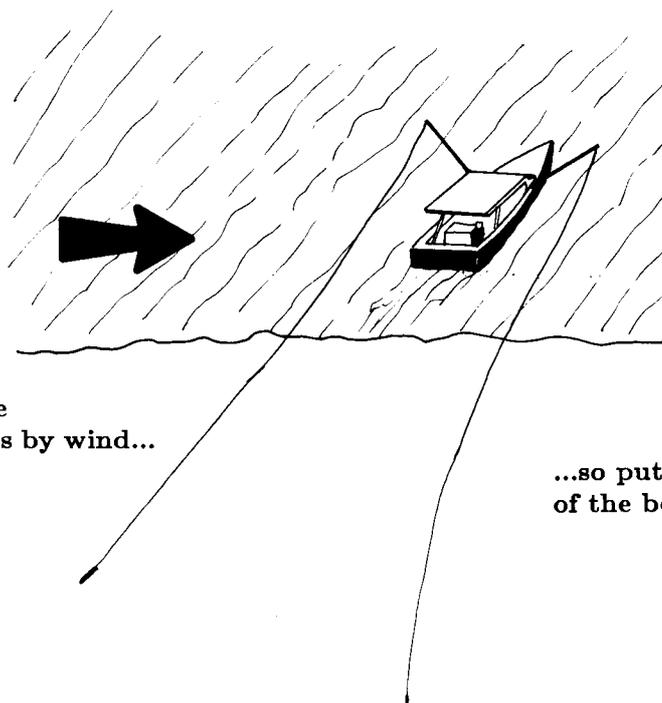
Rainy, windy days...



**...usually give the best fishing.
Use larger baits and lures**

When trolling in a beam wind, it is best to put your heaviest lures on the upwind side of the boat. This way there is less chance of the lines being pushed together or against the side of the boat by the wind.

TROLLING IN A BEAM WIND



**Heaviest lures will be
least pushed sideways by wind...**

**...so put them on the upwind side
of the boat to avoid line tangles**

CHAPTER 5: TROLLING TECHNIQUE

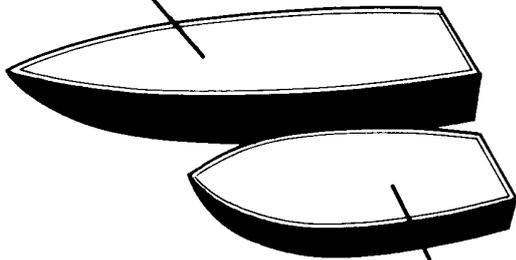
SECTION K: TROLLING SPEED

Below are some of the things which govern the speed at which trolling should be carried out.

Vessel considerations

The type of boat and prevailing wind and sea conditions may limit speed. The motor's fuel consumption, and therefore the fisherman's operating costs, may increase above a certain speed, especially with displacement (non-planing) hulls.

Long skinny boats are faster...



...than short wide ones

Type of bait or lure

Many natural baits do not tow well at high speeds, and in general should not be trolled faster than 5 knots. Many artificial lures can be trolled much faster than this, although some will skip across the water surface unless they are weighted.

Type of line

If a fish strikes a lure towed at high speed, there is a good chance of the lure being torn straight out of its mouth unless you are using reels fitted with a good drag or brake system. If using fixed lines, keep your speed below 6 knots.

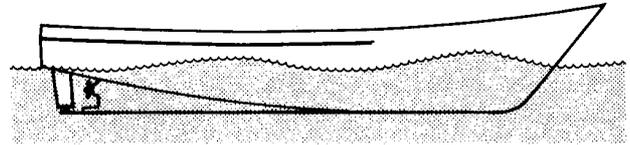
Trolling too fast with fixed lines...



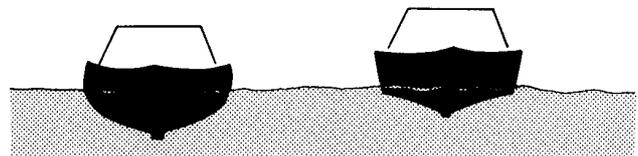
...will tear hook from fishes mouth

HULL TYPE LIMITS SPEED

Displacement hull is slower...



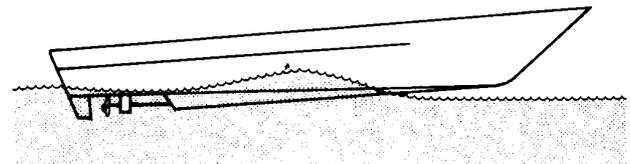
...once it reaches a certain speed, increasing engine power gives extra fuel consumption but not extra speed



Displacement hull

Planing hull

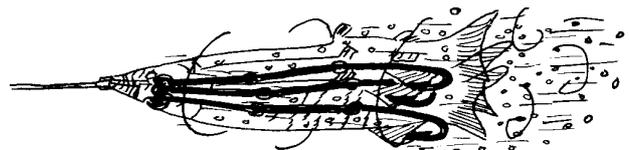
Planing hull is fast...



...but does not carry much load

BAITS AND LURES

Many baits can't be trolled fast...



...but some lures are made for high speed

TYPE OF LINE

Trolling too fast with fixed lines...



...will tear hook from fishes mouth

Fish preference

If trolling on tuna schools or otherwise for oceanic species, reasonably high speeds (6 -12 knots) usually get a better biting response among the fish. When trolling across open ocean areas, a high speed also enables the fisherman to cover more ground, and therefore increases the chances of his lure passing among scattered groups of fish. However, lower speeds (under 5 knots) are preferable when trolling in the lagoon and on the reef edge. Many fish species found in these environments tend to be territorial in their habits, and will not chase a fast-moving lure too far from their home ground. Others are simply not fast enough to catch high-speed lures.

TYPE OF FISH



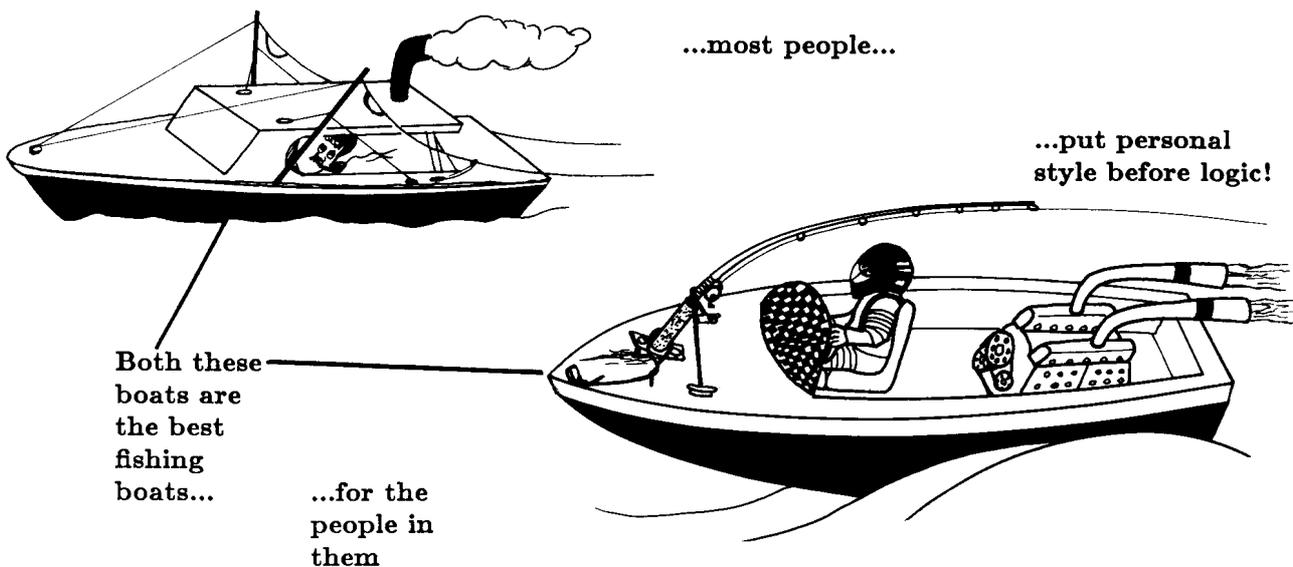
Some fish cannot catch lures trolled at high speed

The human factor

A final and perhaps the most important factor affecting the fisherman's choice and presentation of fishing gear cannot be accounted for. It is the fisherman's own personal preference, based on the way he likes to do things. Some people like fast cars or fancy clothes, while others prefer old bangers or scruffy T-shirts. Likewise, many fishermen choose their boats, gear and fishing style for reasons that may not have very much to do with fishing.

THE HUMAN FACTOR

When choosing fishing boats or gear...





Location: Vanuale, Fiji

Photo: G. L. Preston

Swinging aboard a small skipjack



Location : Koro, Fiji

Photo : G. L. Preston

Gaffing aboard a medium-sized yellowfin