



FISHERIES FACT SHEET

TAILOR



Tailor
Pomatomus saltatrix

Pack hunters

Tailor is one of the most popular recreational fishing species along the west coast of Western Australia. They hunt in packs along inshore coastal waters, estuaries and nearshore reefs, slicing their way through schools of smaller fish.

Tailor by name and by nature

With a missile-shaped head, forked tail and powerful streamlined frame, they are ideally suited to the turbulent waters of surf beaches and coastal reefs.

The most striking feature of the tailor is its impressive protruding lower jaw with a mouthful of razor sharp teeth – ideal for slicing through schools of smaller fish and can be a risk to the fingers of unwary fishers.

Although they are silvery in colour, they can display a distinctly green, olive or bluish tinge along their backs. Their fins are a pale green with a tinge of yellow.

The common name, tailor, originates from the fish's ability to cut through fishing nets with its sharp teeth (as illustrated in the picture below).



Photo: Amber Howard

Distribution

Tailor are widespread in cool tropical and warm temperate coastal waters of most oceans, except the eastern and north-western Pacific Ocean. In Australian waters they are found from around Hervey Bay in Queensland to the Dampier Archipelago in Western Australia and around Tasmania.

Across its distribution, tailor are known by many different names, such as bluefish in the USA, elf on the west coast of South Africa, shad on the east coast of South Africa, and either anchova or enchova in South America.

Separate, genetically distinct breeding stocks occur in each region of the world. For example, tailor populations along the east and west coasts of Australia are made up of separate genetic stocks.

In WA, tailor range from Exmouth southwards to Augusta and then in much lower numbers along the south coast.



Worldwide
distribution
of tailor



Tailor are the only species belonging to the family Pomatomidae.

Growing up fast

Both juvenile and adult tailor are carnivorous. Fish form the bulk of their diet, but tailor also frequently eat invertebrates, such as squid and crustaceans. Their preferred food source depends on the dominant prey available in the local aquatic environment. Their own body size is also a factor; very small juveniles (less than 50 millimetres) mainly eat small crustaceans because they are too small to catch fish. As they get bigger they switch to fish.

Tailor grow relatively fast. Recent research by the Department of Fisheries found growth of WA tailor was 0.5-0.8 millimetres per day during the first three months of life (when length is less than 15 centimetres). Elsewhere, they can grow much faster, for example, on the east coast of Australia they grow 0.7-1.3 millimetres per day and on the Atlantic coast of North America 0.7-2.1 millimetres per day. In WA, their growth slows to about 0.4 millimetres per day in older juveniles, reaching 22-25 centimetres after one year and 35-38 centimetres after two years. After five years they weigh more than a kilogram and measure more than 50 centimetres in length.

In WA, tailor reach sexual maturity in two to three years with 50 per cent of female tailor in WA maturing by the time they reach 32 centimetres, and virtually all maturing by 39 centimetres.

Recently, Department of Fisheries research scientists received a fish frame (skeleton with the fish's head and guts intact) for the tailor research program that exceeded one metre in length. The growth bands in the otolith (ear bone) of the fish pictured below show the fish to have been 10 years old.



The 'frame' of the 10 year old tailor donated by a recreational angler fishing in Augusta. Photo: Ian Keay

Reproduction

Tailor are 'serial spawners' – they release eggs and milt on a number of occasions during the spawning season. The fecundity of females (number of eggs released during the spawning season) increases with body size, from about 300,000 eggs produced by small females to more than three million eggs by the largest females. Spawning occurs along the WA coast at various sites, from spring through to autumn, depending on the location.

Tailor eggs and larvae are planktonic and are dispersed by ocean currents. Once they metamorphose into juveniles, young tailor swim into sheltered marine areas and estuaries.

It is likely that yearly variations in coastal currents influence where juvenile tailor settle or end up. As a result, the level of recruitment into specific regions along the coast varies from one year to the next.

Feeding frenzy

Juvenile tailor feed on small fish (such as whitebait, blue sardines, whiting, gobies and anchovies), squid and crustaceans. These small tailor, up to about 30 centimetres in length, are often referred to as 'choppers' because of their behaviour of



Tiny juvenile tailor like these ones can grow into marauding choppers. Photo: Dan Pupazzoni

biting prey into pieces before consuming them. Usually, the tail is bitten off first to disable the prey, with the remains cleaned up afterwards or by other fish in the school. Feeding frenzies on schools of smaller fish have been witnessed within a couple of metres of the water's edge.

Adult tailor will prey on pretty much all types of fish including sea mullet, yellow-eye mullet, whiting, garfish, pilchards and blue mackerel. They will also eat small or injured members of their own species. It is not unusual to see tailor with varying degrees of scars and healed bite marks.

During daylight hours, schools of tailor tend to rest in deeper waters away from the shore. They wait until dusk and dawn to begin their main feeding runs close to shore.

Tailor, in turn, are food for a number of shark species.



In the Mediterranean Sea, schools of tailor bite their way through sea cage nets to consume aquacultured finfish.

Surf's up

Tailor prowl the surf zone in packs that can sometimes be spotted cruising behind breaking waves. Their well-suited body shape enables them to navigate through the turbulent surf with ease.

Tailor are also found around rocky outcrops and reefs along the shoreline. Offshore reefs are another prime habitat, especially for larger tailor.



A school of tailor move purposefully over the reef to seek out prey fish. Photo: F. Cardigos, ImagDOP

On the move

Recaptures of tagged fish show that the migratory movements of tailor in WA are complex and varied. Some fish are highly mobile and can move substantial distances along the shore, either northwards or southwards. For example, one tailor tagged in Perth was recaptured 580 days later, 635 kilometres away in Kalbarri, while another fish was caught at Seabird (between Jurien and Guilderton) two weeks after being tagged at Port Gregory, 370 kilometres away.

Tailor move in schools of similar size and prefer a narrow water temperature range of between 18°C and 25°C.

Scientists have tagged tailor to show that some fish migrate in both a northerly and southerly direction along the coast while others prefer to stay close to home.

When tailor reach maturity, they leave the protection of estuaries and begin schooling along the beaches during spring and summer. This migration from estuaries is referred to as

the 'summer run' of tailor by many fishers. As water temperatures begin to cool down after summer, these tailor move offshore in what is thought to be a pre-spawning migration.



A tailor being tagged for science.
Photo: Josh Brown

Monsters and jumbos

The waters between Carnarvon and Kalbarri are the renowned haunt for the largest 'monster' tailor in the State. In the southern part of its range, large tailor, often called 'jumbos' by recreational fishers, can occasionally be found following schools of Western Australian salmon.

Fishy science

The Department of Fisheries' tailor recruitment monitoring program has been running since 1994.

Tailor have been caught, measured and released at various locations on the Swan River and along metropolitan beaches.

This is one of a number of examples where volunteers, under the supervision of Department of Fisheries' scientists, have provided crucial help with fisheries research.



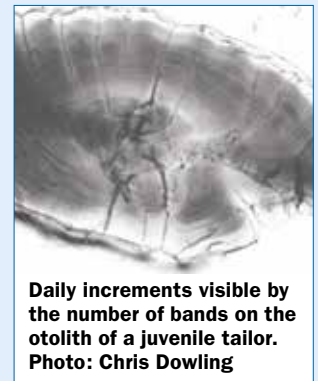
Fisheries volunteer Laurie Birchall with the 10,000th tailor to have been caught since the monitoring program began. Photo: Ben Carlish

The catch rate of juvenile tailor caught each year by volunteer fishers provides an index of annual recruitment strength. This is used by researchers to monitor the status of the Perth tailor fishery.

Researchers can determine the age of juvenile tailor by counting the number of daily growth rings within their otoliths (ear bones). This information is used to calculate

the day they were spawned and, if combined with information on prevailing currents, can be used to deduce possible areas where they were spawned.

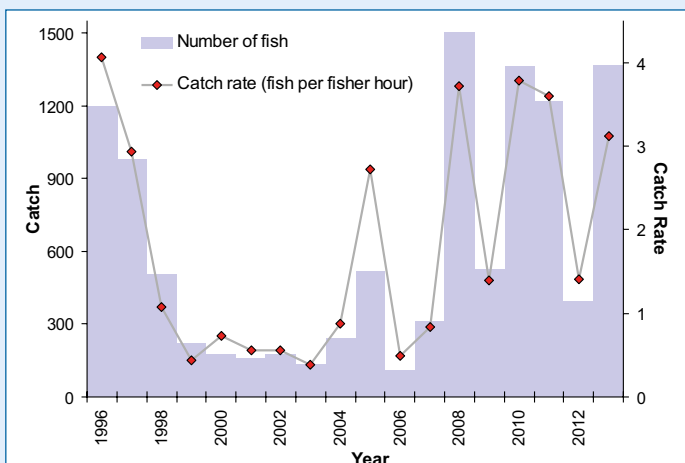
Research evidence suggests that the majority of juvenile tailor in Perth originate from two separate annual spawning events. These juveniles are made up of two distinct size groups of fish that differ in age by approximately six months. One group is spawned during winter and the other group is spawned during summer. The winter-spawned fish originate to the north, possibly around Kalbarri, or even further north in the Gascoyne region. The summer-spawned fish could potentially originate from spawning activity in the Mid-West, metropolitan area or the South-West. All these juveniles are transported as larvae to Perth by ocean currents.



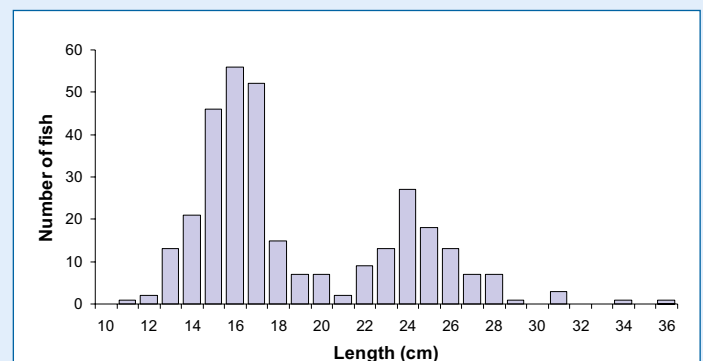
Daily increments visible by the number of bands on the otolith of a juvenile tailor. Photo: Chris Dowling

As juveniles become adults, many migrate out of the Perth region, dispersing north and south into other areas throughout WA.

Given the high level of connectivity between tailor in all zones in WA, due to larval dispersal and adult migration, fisheries managers need to carefully manage tailor populations in all areas, not just in Perth, to ensure the sustainability of the popular Perth fishery.



The annual catch and average annual catch rate of juvenile tailor caught by the participants of the recruitment monitoring program.



Length distribution of juvenile tailor caught by volunteers in the Swan Estuary, March 2013, showing two distinct size groups that represent winter-spawned (smaller fish) and summer-spawned (larger fish) cohorts.

Tackling tailor

Tailor are a major focus of shore fishing along beaches and estuaries on the west coast of WA. Most of the recreational catch comes from along the coast from Jurien Bay to Bunbury.

Their ferocious appetites, schooling behaviour and distribution close to shore can make them an easy catch. When tailor schools are 'on the bite', it is possible to catch a fish every cast.

In years gone by, thousands of fishers were often seen along Perth beaches chasing the annual tailor run. This targeted fishing effort appears to have contributed to a decline in the average size and numbers of tailor caught within the Perth metropolitan area since the 1980s.

Adding to the problem has been an extended period of low recruitment of juvenile tailor to the Perth metropolitan area in the early to mid-1990s, indicated by the Point Walter tailor angling research program. These recent problems have shown that tailor is a vulnerable species that requires careful management. It is therefore important to know more about this species (age structure, reproduction, movement, recruitment dynamics and so on) in order to best manage tailor stocks to protect them for the future.

i Studies have demonstrated that tailor have a high chance of survival when released if ganged hooks or lures with no treble hooks are used in combination with appropriate handling techniques.



Phil Shilcock with a fine Kalbarri tailor. Photo: Andrew Cribb

Commercial fishing for tailor

Most commercial landings of tailor in Western Australia are taken from Shark Bay using haul nets and beach seines. Further south, the situation is reversed – commercial fishers only take about five per cent of the tailor caught in these areas. Minor commercial catches are taken in the estuarine fisheries of the South-West and South Coast using gill nets, haul nets and beach seines.

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Glossary

Cohort

A group of fish

Distribution

Geographic area within which a species is generally found

Predator

Animal that naturally preys upon other animals

Metamorphosis

Rapid change of body shape such as the change from a larval form to an adult form

Migrate

To move from one habitat to another, usually for purposes of breeding or spawning

Otolith

Fish ear bone

Recruitment

Addition of fish to a stock or population as a result of reproduction, migration or growth to legal size

Schooling

Behavioural grouping together of fish, which then usually move together as a group

Spawn

Release or deposition of spermatozoa or ova, of which some will fertilise or be fertilised to produce offspring

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FURTHER INFORMATION

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