

INFORMATION SHEET

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WILDLIFE RESEARCH BRANCH

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FAUNA OF THE FOREST FLOOR in the south-west of Western Australia

A forest is a complex association of trees, shrubs, grasses, birds, marsupials and many other forms of animal and plant life. These may range in size from a microscopic bacterium to a karri tree 87 m in height. Irrespective of size, all components play a vital role in the web-of-life processes which are so necessary to the health and sustenance of the whole forest. The forest floor itself is an interesting area for study, since a variety of fungi, insects, bacteria and animals live in the soil and litter layers.

This information sheet describes some of the common animals which live in the forest areas in the south-west of Western Australia. None of the microscopic species have been included, only those which are obvious and can be found after a few minutes of searching in the leaf litter or under logs, stones and bark.

Most animals can be collected into 70 per cent alcohol, 5 per cent formalin, 75 per cent methylated spirits or into a container with damp soil and litter, but remember:

- (a) ALWAYS use forceps or wear a thick glove when collecting. Many of the animals can give a poisonous sting or bite.
- (b) Return the logs and stones to their original position whenever possible. This will ensure that the animals' environment will not be destroyed.

Look closely at the specimen and try to identify it using the simplified key, the descriptions and the sketches provided.

KEY TO THE FAUNA

Narrow animals which are longer than broad and are more or less the same width along the whole body with legs

- 1 millipedes
- 2 centipedes
- 3 onychophora
- 4 insect larvae

without legs

- 5 slugs
- 6 earthworms
- 7 land planarian worms
- 8 insect larvae

Broader animals, some with a distinct tail,

with more than eight legs

- 9 woodlouse
- 10 amphipod

with eight walking legs

- 11 spiders
- 12 ticks
- 13 phalangids
- 14 scorpions
- 15 pseudoscorpions

with six walking legs

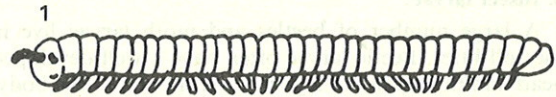
- 16 insect

with no legs

- 17 snails
- 18 insect larvae

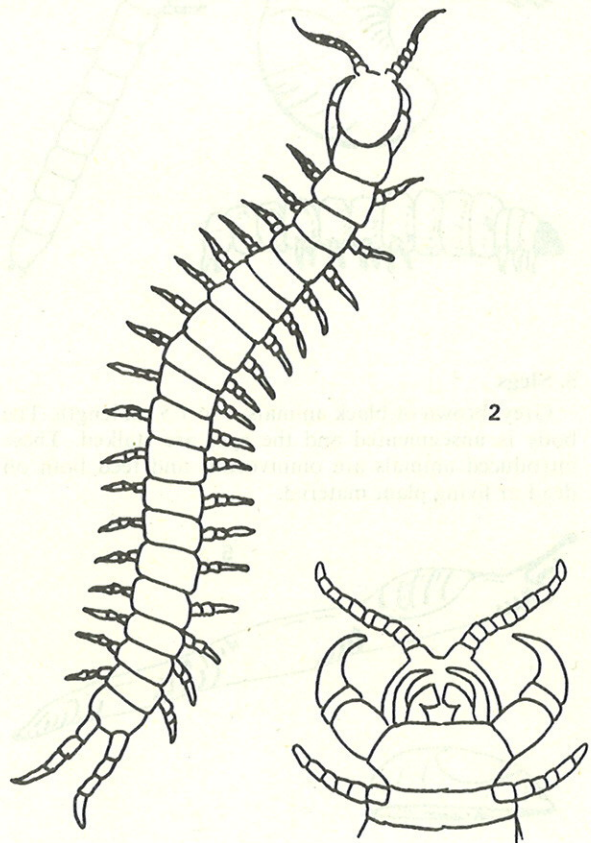
1. Millipedes

Long, often hard-shelled animals with a rounded front to the head to assist in burrowing and pushing through the soil. Legs are slender with two pairs on each segment except for the first three or four. Feed on dead plant material in the litter and soil.



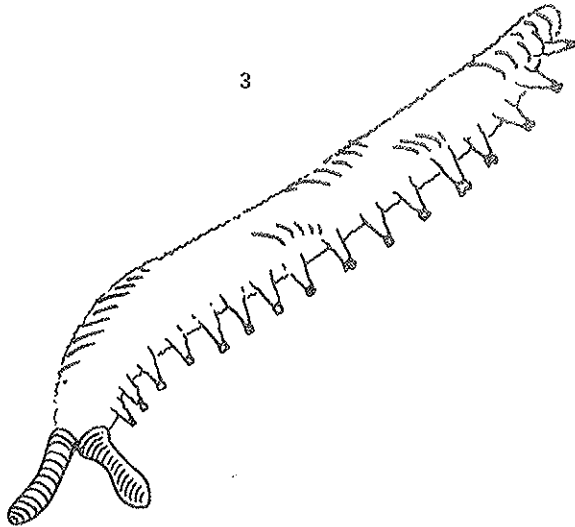
2. Centipedes

Long, slender animals with many legs and a flattened body. The jaws and poison fangs are on the underside of the head. All are carnivorous and feed on insects, woodlice and millipedes.



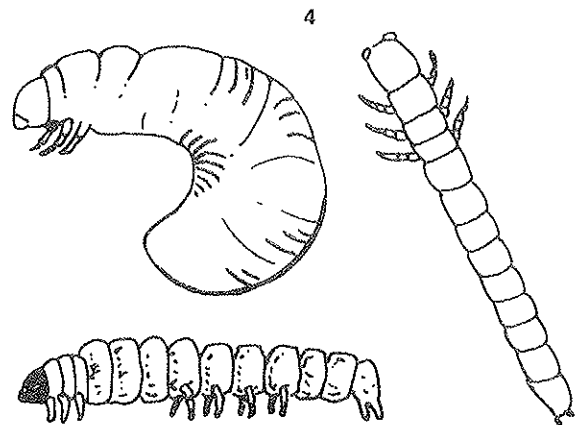
3. Onychophora

Often called the missing link between worms and insects. Resembles a caterpillar, is between 2.5 and 5 cm in length and with 15 to 16 pairs of legs. It is carnivorous, usually feeding at night on small insects and woodlice.



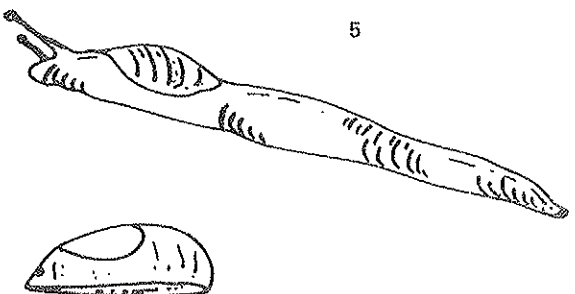
4. Insect larvae

A large number of beetles and moth larvae live in the soil litter. Beetle larvae often have a well-developed head and three pairs of legs at the front end of the body. The posterior varies greatly. It may be soft, white and fat (barbees) or slender, dark and shiny (wireworms). Butterfly and moth larvae (caterpillars) have a soft body with three pairs of legs near the head, four pairs of stumpy legs half-way along the body and a terminal pair of stumpy legs.



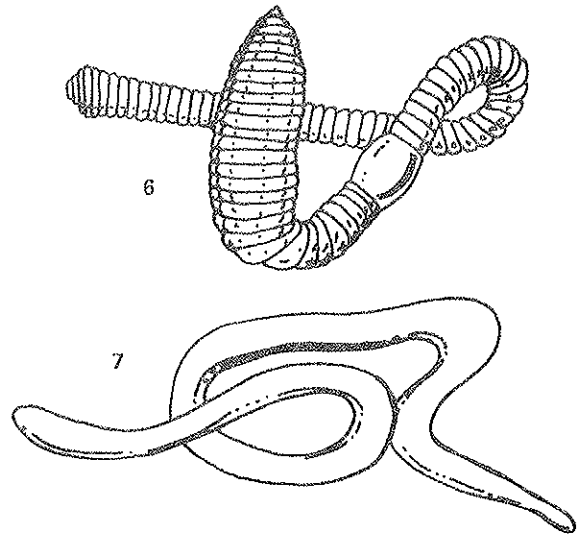
5. Slugs

Grey, brown or black animals, 1 to 7.5 cm length. The body is unsegmented and the eyes are stalked. These introduced animals are omnivorous and feed both on dead or living plant material.



6. Earthworms

Long, segmented animals with small bristles on each body ring. May be creamy in colour but are usually a dark, brownish-red. Length varies from 1 to 15 cm. Earthworms ingest large amounts of soil and digest the fragments of leaf matter and animal material.



7. Land planarian worms

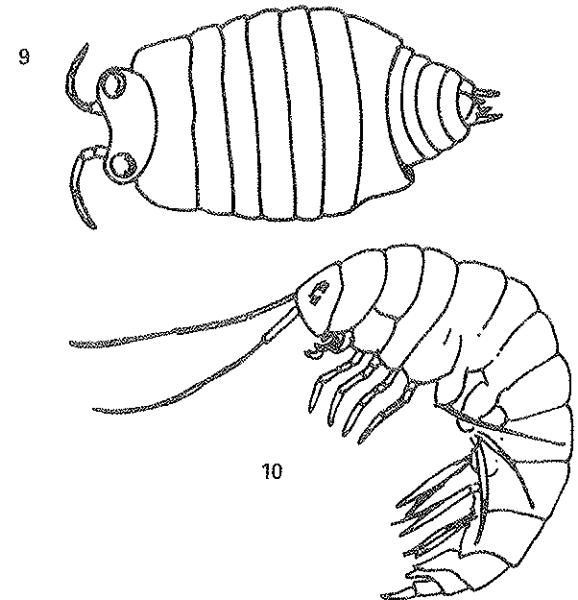
Flat, shiny, glossy, slimy, unsegmented worms often found coiled round themselves in a jelly-like blob. Length is 5 to 8 cm. They are either scavengers or carnivorous on other animals.

8. Insect larvae

Many insect larvae are long, thin and legless (e.g. fly and ant maggots). Most of these are difficult to identify unless they are allowed to develop to maturity.

9. Woodlouse

Flattened animals 0.6 to 2.5 cm in length, with distinct segmented armour plating, seven pairs of legs and a short, legless tail section. Usually grey or brown in colour; some species can roll into a ball but others cannot. All feed on dead and decaying plant material.

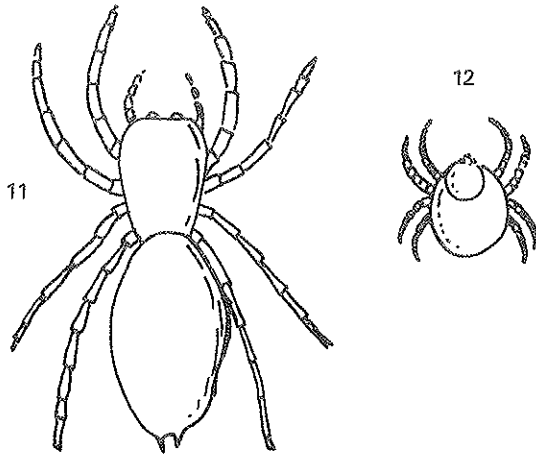


10. Amphipods

Narrow, deep bodied animals 1 to 2.5 cm long. They resemble prawns, shrimps and crayfish. These dark, metallic grey animals are fast moving and can both hop and run. They occur mainly in the damper areas and feed on dead plant material.

11. Spiders

Over 25 species of carnivorous spiders are commonly found in the leaf litter and under logs. Several simple guides to the spiders are available (e.g. Main's *Spiders of Australia*).

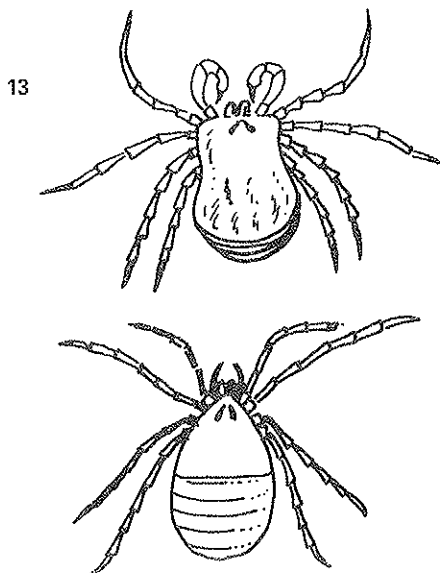


12. Ticks

These are oval, red, fairly flat, small animals (0.2 to 1.2 cm in length). The legs are near the front of the animal and there is no distinct waist or body segments.

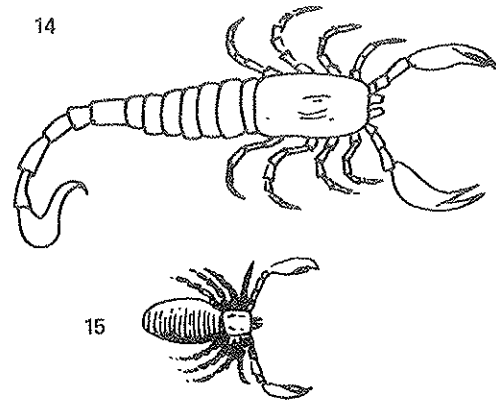
13. Phalangids

These animals resemble spiders and are carnivorous but the body is not divided by a waist. The segmented abdomen is broadly joined to the front part of the animal. They have eight legs and two pedipals (these are leg-like appendages on either side of the jaws).



14. Scorpions

May be either carnivorous or scavengers and feed mainly at night. During the daytime they can be found in their burrows under logs, stones or the bark of trees. Length varies from 2 to 15 cm. Scorpions have eight legs, two large pincers and a long tail with a sting on the end.



15. Pseudoscorpions

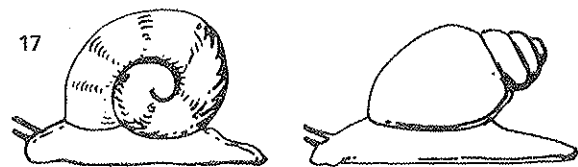
Very small (0.5 cm) animals which resemble scorpions but have no tail. They are carnivorous, feeding on mites, springtails and other small insects.

16. Insects

It is impossible to describe the great variety of insects in this sheet. The reader is referred to a number of good books on this subject (e.g. J. Child's *Australian Insects*).

17. Snails

As with slugs, the large snails and the small "garlic smelling" snails are also introduced. There are, however, many indigenous small snails (0.6 to 1.2 cm), some of which have very beautiful shells. These are not uncommon in the karri forests of Western Australia.



18. Insect larvae

Small insect larvae, pupae and egg cases are common on all sites, but cannot be adequately described in this information sheet.

