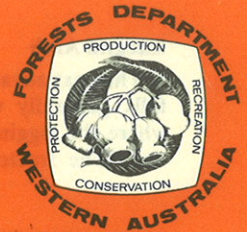


INFORMATION SHEET

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FISHERIES AND
WILDLIFE

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Logging Series No. 2 SNIGGING METHODS

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Snigging is the term used to describe the movement of a log from the stump to a point where it is loaded and hauled to the sawmill, or to an intermediate loading stage.

Man Power

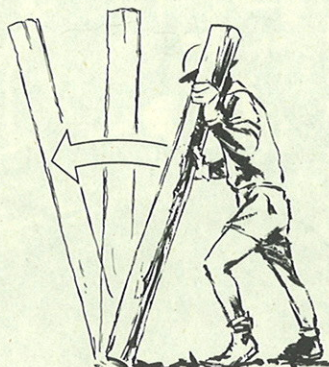
The earliest methods of timber production in Western Australian hardwood forests were those of **Hewing** and **Pit-sawing**. Hewing was a three-part process of felling, splitting and broadaxeing large pieces of wood for railway sleepers, bridge and jetty decking, and large beams. The work occurred at the stump and only the finished product was carried or dragged to a loading site.

Much the same process occurred when **Pit-sawing** (see Information Sheet No. 9), except that a log was rolled with bars and levers onto a saw-pit.

In pine forests over much of the world and especially during the removal of the small first thinnings—pulp and particle board material—the logs were always carried to a loading point, rolled, or “end-for-ended” (picking up one end at a time) into small stacks. This heavy work is still common throughout Australia even in the mid '70s.



Man Power



Animal Power

Ancient civilisations used beasts of burden, even before the invention of the wheel. In the extraction of logs from a forest, animals have been used for thousands of years; singly for small or light logs, and in teams for heavy logs. The use of horses to extract medium and large size pine logs in Western Australia lasted until about 1955, sometimes using a small steel sled to reduce friction at the nose of the log and to keep it clear of the soil. Elephants are still used in Burma to extract heavy teak logs.

In the jarrah and karri forests, teams of horses and of bullocks were used for snigging until the 1920s, and the mechanical device used to assist them is well represented in folk museums throughout the forest zone, from Mussel Pool at Caversham, to Pemberton.

This device was called the **Whim**, comprising a pair of large wooden wheels with iron rims and a leverage device on the cranked axle allowing the machine to “straddle” logs. Chains were attached that caused the front of the log to be lifted clear of the ground while under load, but dropping to the ground when hauling stopped. Teams of up to 20 horses or cattle were used to haul logs out of the bush with this device.

Note: At the time of writing, whims are displayed at:

- Mussel Pool, Caversham
- Margaret River townsite
- Dwellingup, near the hotel
- Manjimup Timber Museum.

One of the biggest whims on display is at Mussel Pool with wheels of 3 metres diameter.

Steam Tractors

The first advance from horse/oxen power was that of **Steam Traction Engines**—for winching logs to a railroad or to haul logs out of the bush. These engines were the forerunner of modern petrol and diesel tractors. They were large, very heavy and a regular cause of bushfires.

A few of them remain in folk museums.

The Logging Arch

When petrol and diesel powered crawler tractors (tracked) evolved, they were not always large enough to drag logs out of the bush, and so the **Logging Arch** was evolved. The arch embodied many of the features of the whim, but had either tracks or pneumatic tyres and a P.T.O. powered winch that lifted the butt into position within the arch.

Integral Arch

The next advance in extraction is variously named but falls generally within the description **Integral Arch**, where the logging arch and the tractor are built as one unit. The tractors are usually articulated—its turning

effect is achieved by a fulcrum point built into the body between the front and back wheels. The design varies but common features are a geared high speed and powerful winch, a small spar or jib and a solid steel "heel-plate" against which the log or logs can be held.



Animal Power: A karri log on two skidders and hauled by bullock team.

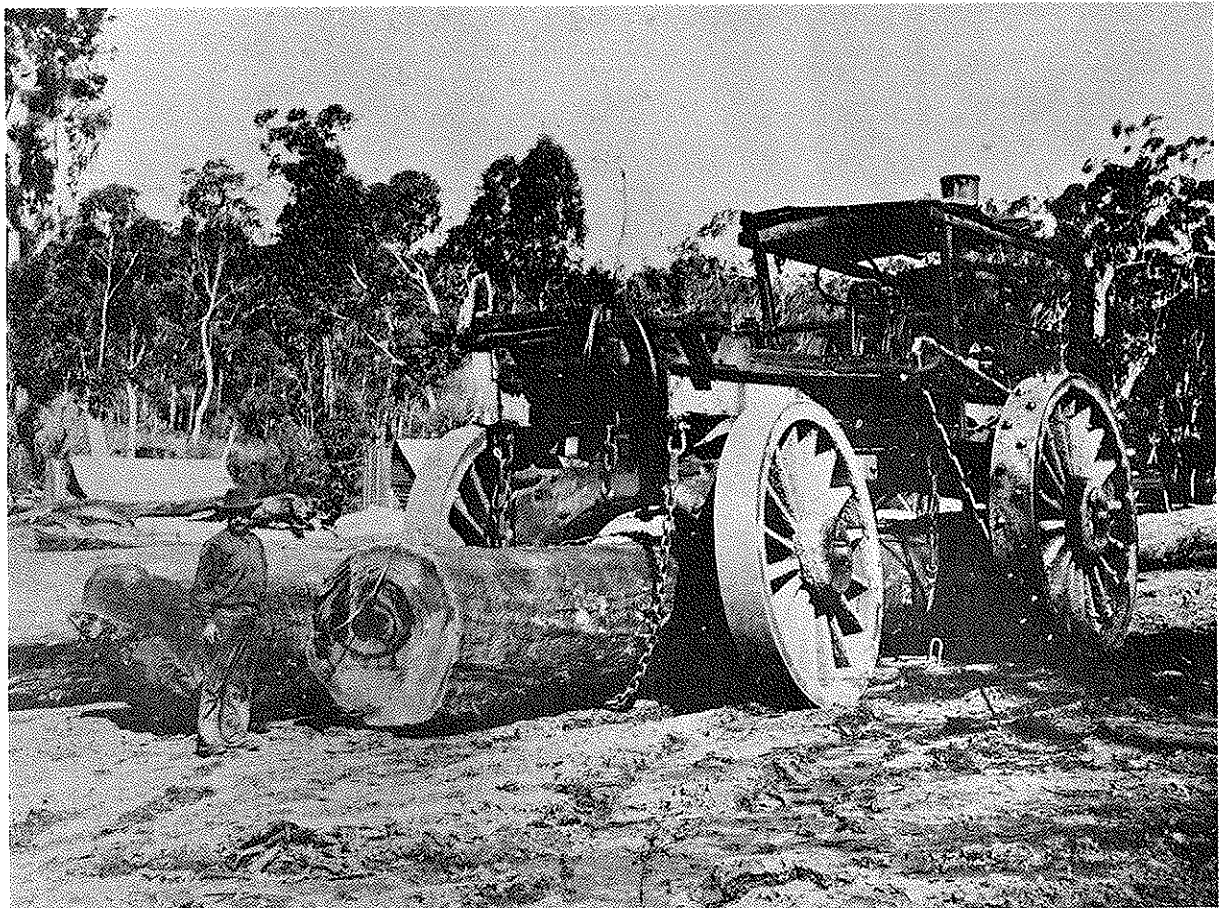
Animal Power: Horse team snigging log. Inset in top left of picture shows the type of steel sled used to reduce friction at the nose of the log.





Animal Power: Horse team and whim.

Steam Power: The "Harry Stevens" mechanical log hauler—reputedly the first of its kind in Australia. It had 3.35 m rear wheels chain-driven by a vertical-boiler steam engine.





BELOW: Rubber-tyred logging arch in the karri forest in the 1960s.



ABOVE: Integral arch in the Grimwade pine forest in the 1970s.