

Waroona CALM Bush Rangers

SUGGESTED FIELD STUDY TOPICS

INFO SHELTER AT THE DAM

*~information shelter on the flora and fauna up at the Dam,
where to go, where to ski, rules and regulations,
tourism attractions in town, etc.*

PUBLIC AWARENESS CAMPAIGN

~How do we get the message across....

NESTING BOXES

~building nesting boxes for animals around the Waroona catchment

PRESCRIBED BURNING

*~ideology behind prescribed burning, how it is done, field venture to observe a
burn, link with the local fire brigade*

ALCOA...EFFECTS AND POLICIES FOR THE ENVIRONMENT

*~balance between reaping the benefits of the land and putting in place policies
for minimising the effects of man and his industry on the environment*

DUNE REHABILITATION AT PRESTON BEACH

*~link with the Preston Beach Residents group who have a vision and plan for
dune rehabilitation and protection*

Supported by:



TUART FOREST DEGREDAATION

~Preston Beach

REPORT ON THE LOCAL ENVIRONMENT

~generate a regular report on the environment

NOISY SCRUB BIRD

FLORA AND FAUNA AT THE DAM

FAWNA...WILDLIFE PROTECTION ..

~link with the FAWNA depot in Yarloop to learn about wildlife protection and rehabilitation...be part of upgrading the existing facilities to include appropriate flora growth and a joey pen

LOCAL REVEGETATION PLANS.....

~determine what native plants once grew in the area and create an appropriate garden

BACKYARD BIODIVERSITY...

~mulching, composting, companion planting, growing your own veggie garden

RIBBONS OF GREEN PROGRAM

*These are just suggestions for discussion and investigation...
we welcome amendements and other options!!!*

Waroona Bush Rangers Programme Term 2 (Manual One)

Date	Venue	Workshop No.	Time	Learning Outcome	Instructors
April 13 th	Camp	1.	9.30 am - 12 noon	PCP #4	Gary
April 13 th	Camp	2.	2-3pm & 7-8pm	BRQ #1,2,3,4,6	Liz & Sarah
April 14 th	Camp	3.	5-6pm	PCP #1,2	Greg
April 15 th	Camp	4.	1-5pm	PCP #3	Gary
April 21 st	WDHS	5.	3.15pm-6.00pm	Review Camp Nature base BRQ #5	Liz & Sarah
April 28 th	TBA	6.	3.15pm-6.00pm	Bush Craft and Survival - Indigenous perspective #1-8	TBA
May 5 th	Fbridge	7.	3.15pm-6.30pm	PCP #2,3,5 WSN #1-3	Gary
May 12 th	Fbridge	8.	3.15pm-6.30pm	Bush Craft #1-8	Gary
May 19 th	Field	9.	3.15pm-6.30pm	PCP #3 WSN #1-3	Gary
May 26 th	Field	10.	3.15pm-6.30pm	PCP #3	TBA
June 2 nd	Fbridge	11.	3.15pm-6.30pm	Abseiling/Wall Climbing	Abseiling Instructor - Grant Tomlinson
June 9 th	Field	12.	3.15pm-6.30pm	PCP #3 WSN #1-3	Gary
June 16 th	Field	13.	3.15pm-6.30pm	PCP #3 WSN #1-3	Gary
June 23 rd	Waroona	14.	3.15pm-6.30pm	Wind Up & presentations	All
				28 hours of formal instruction	

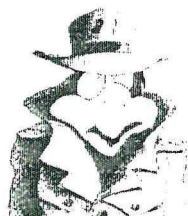
BUDGET

Income

Source	Amount	Total
The Office of Youth Affairs	\$450 X 20 for general	\$9000
The Office of Youth Affairs	\$1500 x2 for instructors	\$3000
The Office of Youth Affairs	\$2500 for unit leader	\$2500
Participants contribution	\$50x20	\$1000
Fundraising	\$500	\$500
Fairbridge Planning, venue for weekly meetings, office space, phone, photocopying, stationary, reception,	\$2000	\$2000
		\$18000

EXPENDITURE

Item	Amount	Total
Camp	\$4540	\$4540
Uniform	\$200 x 20	\$4000
Instructors	\$3000	\$3000
Unit Leader	\$2500	\$2500
Activities	\$1000	\$1000
Guest Presenters	\$50 x 2 per term	\$300
Refreshments	\$400	\$400
Bus Hire/fuel	\$1080	\$1080
Miscellaneous	\$200	\$200
Stationery/files etc	\$200	\$200
Venue hire/Admin	\$2000	\$2000
Total		\$19220
Shortfall		\$1220



Detective Crow Learns About Our Unique, Versatile Vegetation

Detective Crow discovers the unique nature of our native vegetation and some of the many benefits it can provide.

Frame 1 (top left) - Our Bush Is Unique

- The simplistic term “the bush” severely understates the vast array of complex vegetation associations and the animal life that depends on it.

Frame 2 (top right) - Supporting A Complex Food Web

- A healthy remnant vegetation community can support a complex array of life. One study found that over 200 species of animals ranging from possums to small insects can be found on a Marri or Red Gum (*Eucalyptus calophylla*).
- Small islands of vegetation must be connected with wildlife corridors to enable the free movement of animals (the possum in the taxi). Inbreeding, predation, lack of food and disease threaten an unconnected community (discussed later).
- A complex array of predators (Geko with a fly swat, bird fishing, spider's web and the swooping bird controls insects) maintain a natural balance in healthy ecosystems.
- Bush Bee's pollination service emphasises the importance of specialised pollinators in our Australian Bush. Many plants have evolved to rely on specific species to pollinate. Long billed HoneyEaters, Pigmy Possums and a vast array of invertebrates must all have habitat, alternative feed sources etc... to thrive. Feral European Honey Bees are causing problems in the Bush as they are colonising tree hollows, displacing native (non stinging) bees and other animals that rely on these hollows for shelter.
- A lot is happening underground. The deep-rooted vegetation utilise large amounts of water, keeping the ground water low and preventing Salinity (previously discussed). The roots bind our fragile soils and prevent erosion.

Frame 3 (bottom left) - The Many Benefits Provided By Our Bush

- Our native vegetation has provided extensive range of benefits to humans. Some other ways we have benefited is by commercialising many of the wildflowers such as Kangaroo Paws, Geraldton Wax and many others. Australian hardwood timber is being grown in plantations as well as being integrated into farms.
- The strategic use of native species is seen as a way of reducing the impact of many of the land degradation problems that we face. Growing native Acacias in hedges provides valuable stock feed and Melaleucas for oils are two examples.
- Eco tourism provides valuable income for local communities. Whether it is the view, the wild flowers, bushwalking or camping, people are attracted to areas of bush.

Frame 4 (bottom right) - Learning To Live With Nature

- The tree represents the complex array of native vegetation. Native animals rely on it but humans too can benefit financially (money in the persons back pocket) through Eco Tourism, commercialising some species and planting more vegetation to halt long term cost of land degradation.



BUSHRANGERS CAMP AT FAIRBRIDGE per child

Tues 13 th April	Wed 14 th April	Thurs 15 th April
	Breakfast 7 am	Breakfast 7 am
8.30am pickup 9am arrive settle in Environmental Activities 9.30am - 12noon Workshop 1	White Water Rafting - Collie 9am-4.30pm	Abseiling/Wall Climbing 8.30am- 12 noon
Lunch 12 noon	Lunch 12 noon	Lunch 12 noon
Low Ropes 1-2 Work shop 2-3 (Workshop 2) Mud Soccer 3-4 Free time 4-6pm	White Water Rafting Collie 9am - 3pm involve CALM and look at projects Workshop 3, 5-6pm	Workshop 4, Environmental Activities - 1- 5pm Home at 6pm
BBQ Dinner 6pm	Dinner 6pm	
Review workshop 2 Spotlight Videos Lights out 10pm	Binjareb Middar 7.00pm Disco/Drama Night in Dining Hall 7.30pm - 11pm	

STAFF:

Bush Rangers Unit Leader

Fairbridge Youth Development Officer Sarah Hull -

Bush Rangers Chief Instructor & Administration Officer

Fairbridge Youth Development Officer Liz Watkins -

Bush Rangers Instructors

Fairbridge Eco Project Coordinator Gary Heady

Fairbridge Environmental Officer Greg Watts

All staff hold current first aid certificates and Federal Police Clearances.

ACCOMMODATION

Bush rangers will stay in single storey historical cottages.

ACTIVITIES

All activities are supervised by qualified instructors.

BUDGET bush ranger camp

Item	Per participant	Whole camp
Catering @\$ 20 per head per day	60	1380 (x23)
White Water Rafting	30	750 (x 25)
Abseiling	6	120
Eco House	15	300
Videos/Art Supplies	2	50
Staff	57	800
Bus Hire	20	400
Accommodation	20	400
Binjareb Middar	10	200
Tower	2.50	50
Low ropes	2.50	50
Mud soccer	2	40
TOTAL	\$232	\$4540

Income \$50 per participant \$1000 \$3540



Detective Crow Formulates A Bush Rescue Plan

Detective Crow investigates some strategies that are being used to improve the environmental benefit of existing, often degraded remnant vegetation.

Frame 1 (top) Transforming Degraded Water Courses Into Living Streams

- Streamlining is a term commonly used to describe the process of modifying artificial drainage or restoring degraded natural streams into healthy streams.
- Streamlining starts with the erection of a fence to protect the restoration work from grazing animals. The banks are then revegetated with trees and shrubs.
- Within a couple of years eroding watercourses are stabilised, seedlings are surviving and small birds and animal are more prevalent.
- Streamlining filters rainfall run-off and reduces the level of silt and nutrient entering the watercourse. The plants will absorb a large amount of these trapped nutrients. The fence also creates a unfertilised buffer strip. Feral Fertiliser (bottom right) is effectively stopped from entering the watercourse.
- Trees and overhanging shrubs are very important to foster a healthy aquatic environment. Shade from the vegetation keeps the water cool, reduces evaporation and hinders the growth of algal blooms. The leaves that fall into the water are the primary food source for herbivorous macroinvertebrates. Without a constant supply of leaves the system can not thrive.

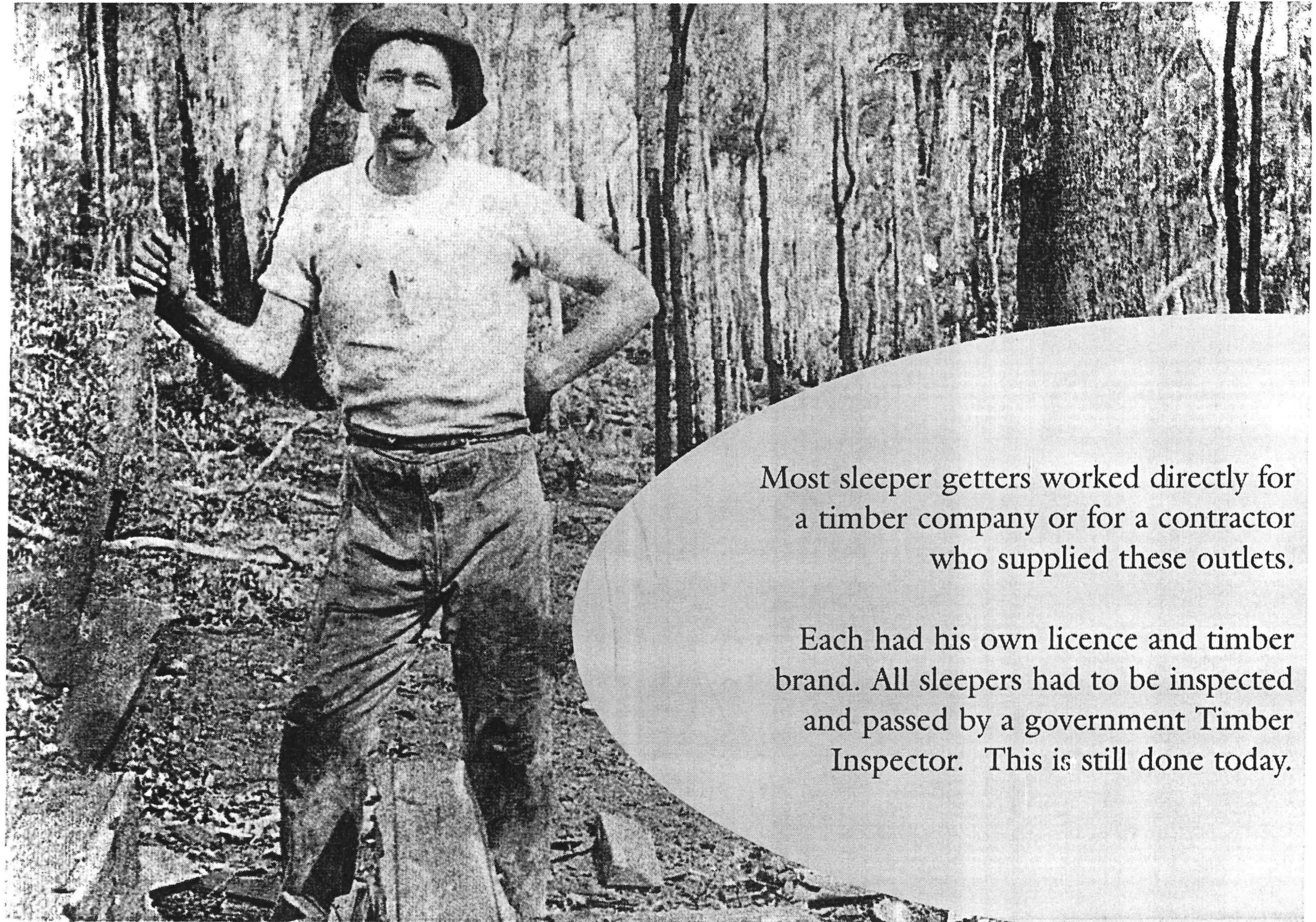
Frame 3 (bottom left) - Wildlife Corridors – A Valuable Link For Wildlife

- Isolated patches of remnant vegetation surrounded by farmland or urban environment need to be linked with corridors of vegetation. Many small birds, mammals, reptiles and invertebrates will not travel across open paddocks.
- This creates problems such as inbreeding, overpopulation and degradation of food sources. If a fire destroys a patch of bush its inhabitants have no escape route.
- The linking corridors of bush encourage the local fauna move between vegetated areas sheltered from predatory birds such as hawks (top right hand corner).
- The strategic planting of trees and shrub belts can improve the productivity of a farming property. The belts can provide a valuable windbreak, diversify their income using farm forestry, control salinity and create a wildlife corridor.

Frame 4 (bottom right) - Everyone Can Contribute To Improving Our Environment

- A bush linked by belts of vegetation can have significant benefits to the local environment. Revegetation efforts are a community responsibility. We can start at home by planting more native plants, composting our weeds (not dumping them in the bush) so that they don't infest local bush.
- Many people are joining community groups, caring for a piece of bush. Many people are growing native trees and shrubs and participating in Landcare projects.
- Some are monitoring their local environment, documenting improvements such as the return of birds can be very satisfying after many hours, days, weeks even years of voluntary work.
- Farmers with the help from government agencies and funding bodies are revegetating at an ever-increasing rate.





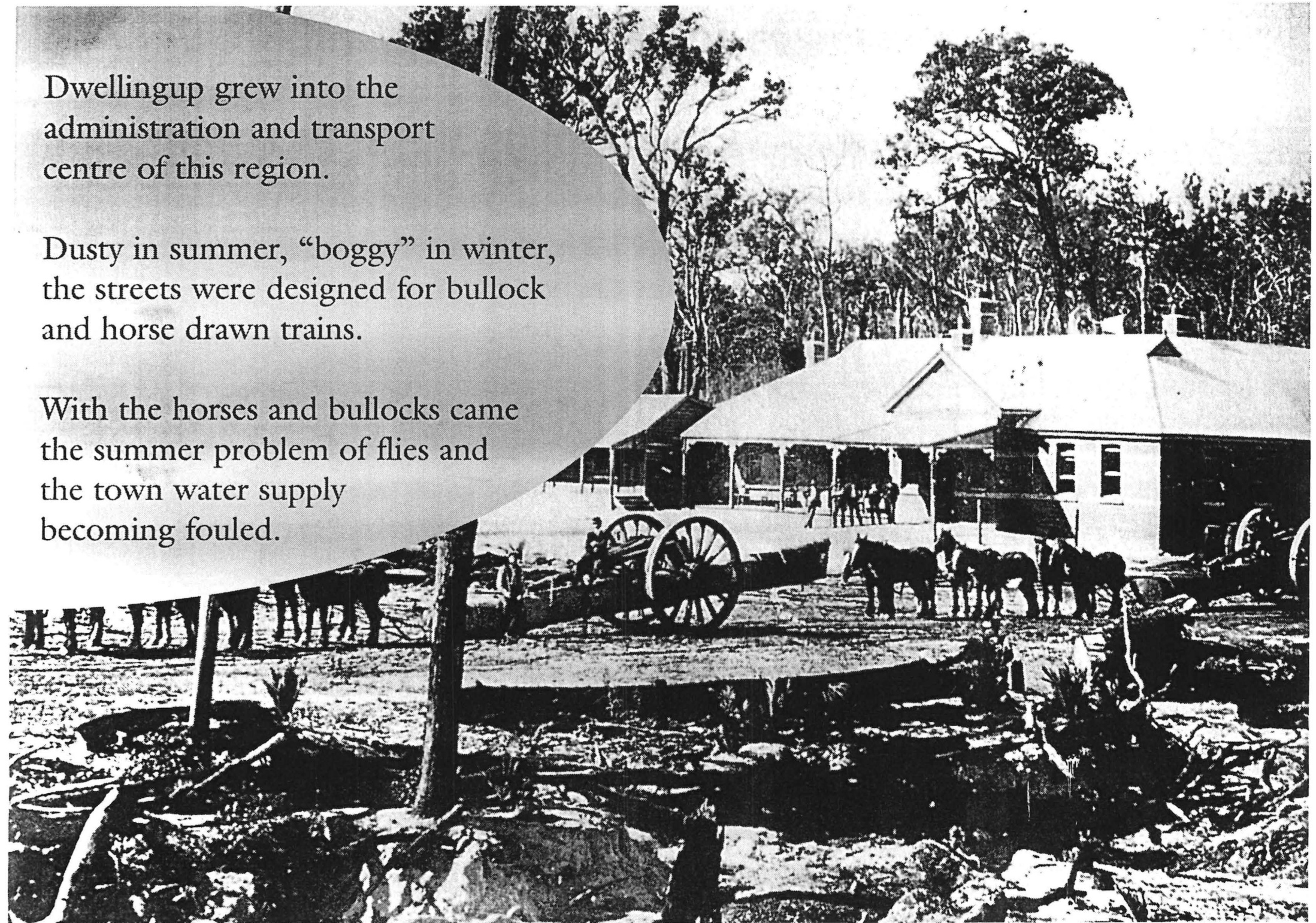
Most sleeper getters worked directly for a timber company or for a contractor who supplied these outlets.

Each had his own licence and timber brand. All sleepers had to be inspected and passed by a government Timber Inspector. This is still done today.

Dwellingup grew into the administration and transport centre of this region.

Dusty in summer, "boggy" in winter, the streets were designed for bullock and horse drawn trains.

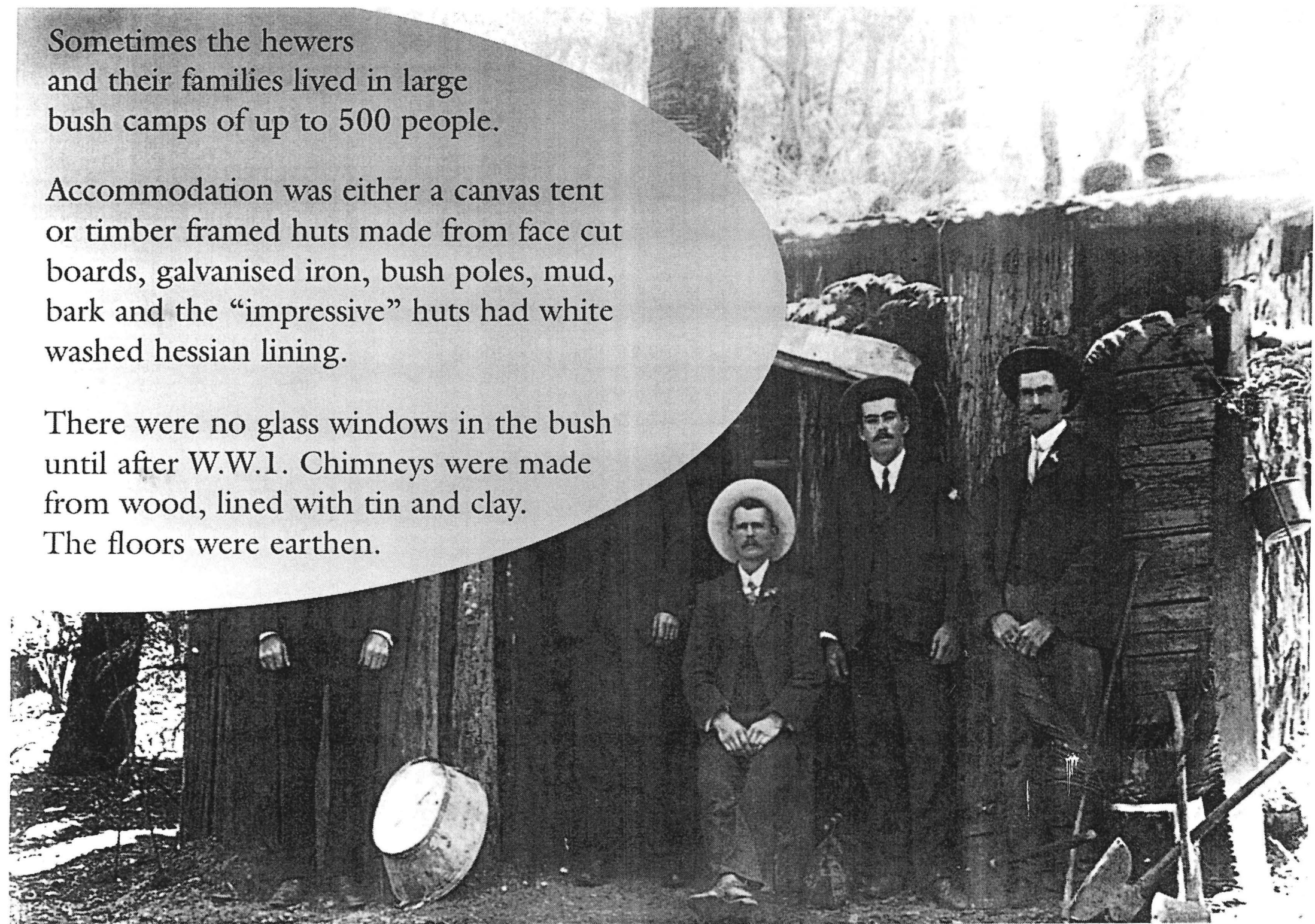
With the horses and bullocks came the summer problem of flies and the town water supply becoming fouled.



Sometimes the hewers and their families lived in large bush camps of up to 500 people.

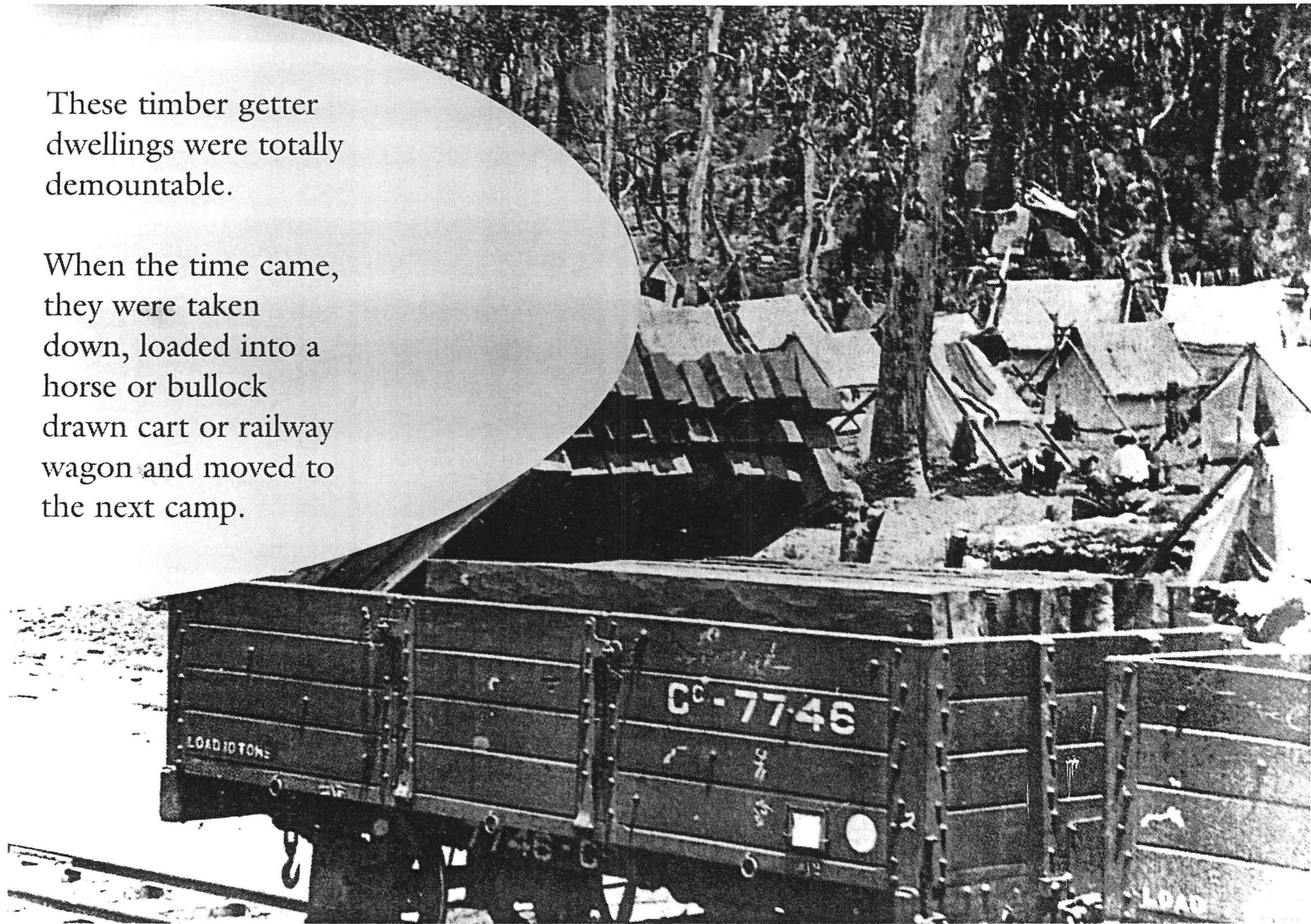
Accommodation was either a canvas tent or timber framed huts made from face cut boards, galvanised iron, bush poles, mud, bark and the “impressive” huts had white washed hessian lining.

There were no glass windows in the bush until after W.W.I. Chimneys were made from wood, lined with tin and clay. The floors were earthen.



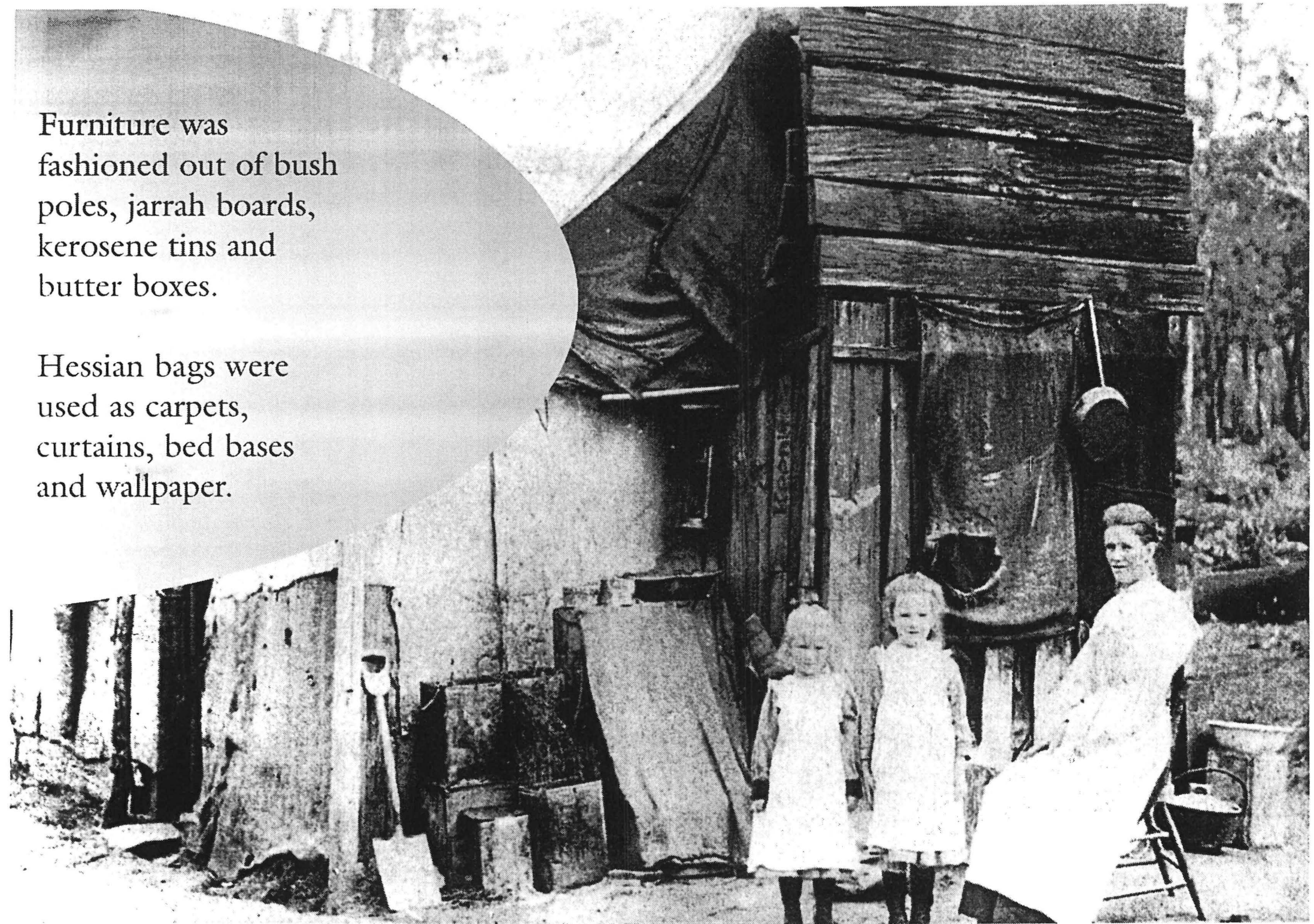
These timber getter dwellings were totally demountable.

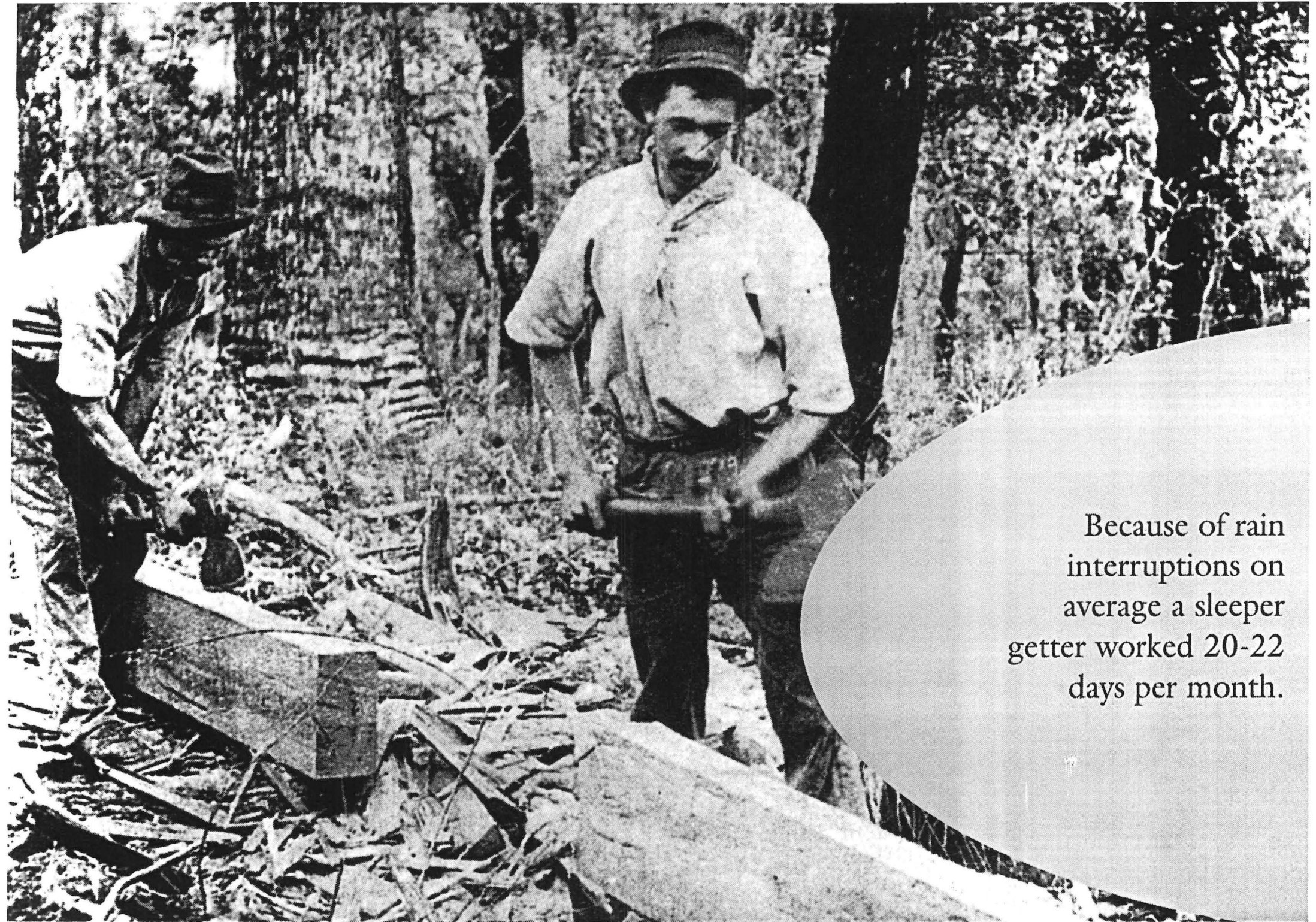
When the time came, they were taken down, loaded into a horse or bullock drawn cart or railway wagon and moved to the next camp.



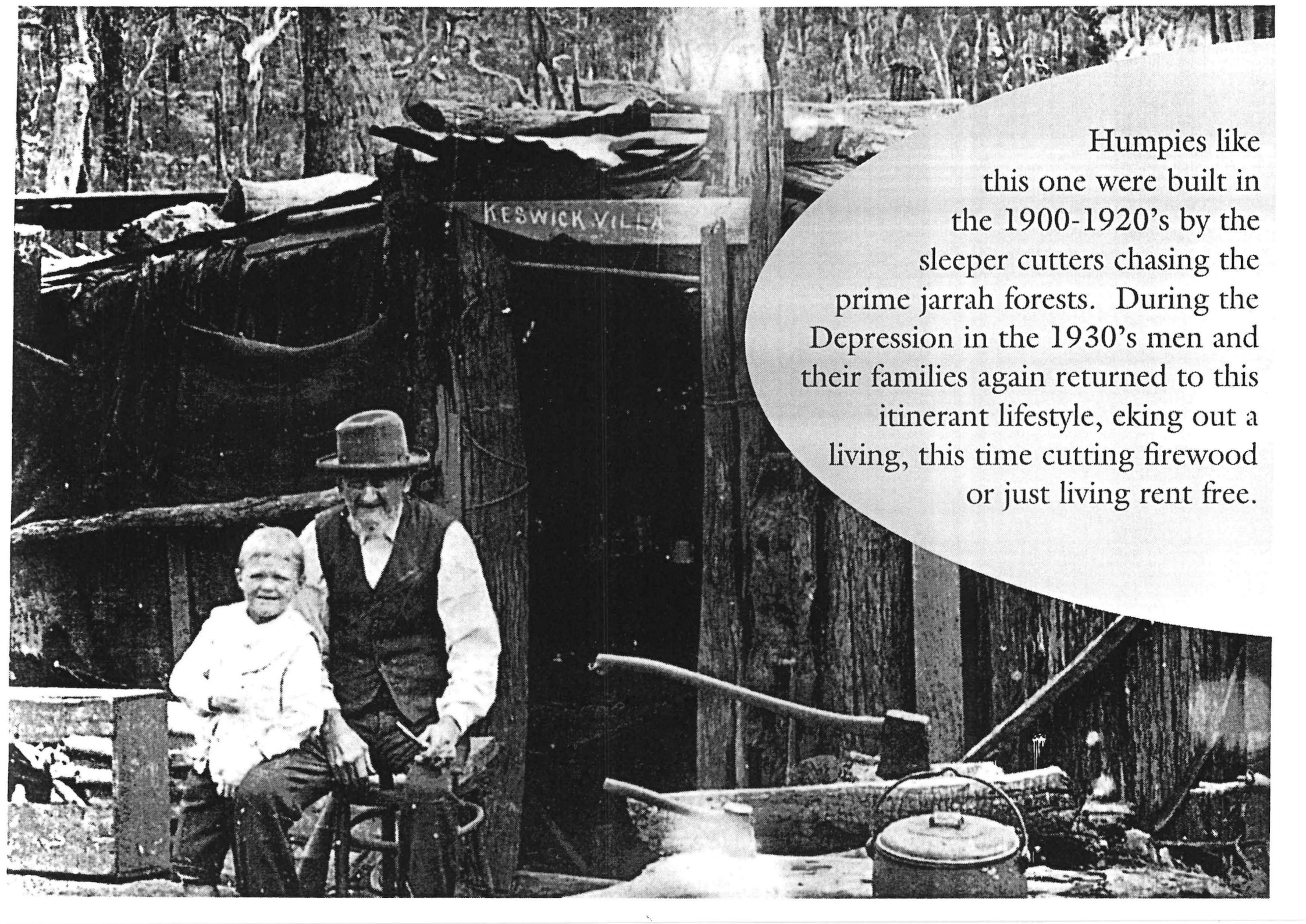
Furniture was fashioned out of bush poles, jarrah boards, kerosene tins and butter boxes.

Hessian bags were used as carpets, curtains, bed bases and wallpaper.

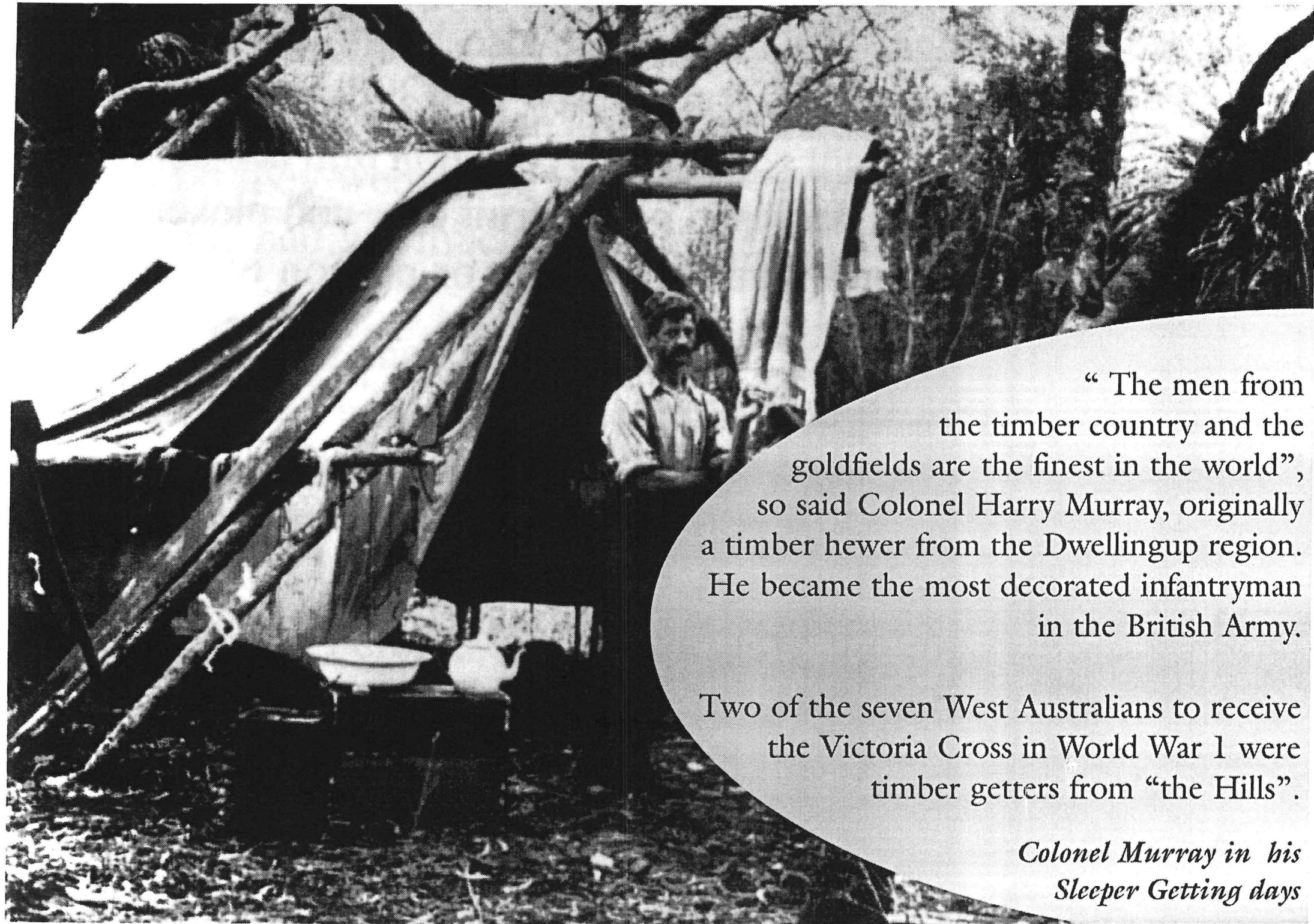




Because of rain
interruptions on
average a sleeper
getter worked 20-22
days per month.



Humpies like
this one were built in
the 1900-1920's by the
sleeper cutters chasing the
prime jarrah forests. During the
Depression in the 1930's men and
their families again returned to this
itinerant lifestyle, eking out a
living, this time cutting firewood
or just living rent free.



“ The men from
the timber country and the
goldfields are the finest in the world”,
so said Colonel Harry Murray, originally
a timber hewer from the Dwellingup region.
He became the most decorated infantryman
in the British Army.

Two of the seven West Australians to receive
the Victoria Cross in World War 1 were
timber getters from “the Hills”.

*Colonel Murray in his
Sleeper Getting days*

World War 1 had a huge impact on the timber hewing community.

Almost to a man they downed tools and enlisted. Sometimes foresters today will come across sleeper getting equipment, shoved into a stump. The owner never returning to claim this way of life.

