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Bee farming : honey flora of Western Australia

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Bee Farming



HONEY FLORA OF WESTERN AUSTRALIA

By R. S. COLEMAN

A GOOD knowledge of the nectar producing plants of the State is essential for success in commercial beekeeping. The beekeeper who has a good knowledge of which plants produce good flows, when the flows might be expected, and where good stands of those plants may be found is the one who has the best chance of success.

Over the past 25 years the Botanical Branch and the Apiculture Section of the Department of Agriculture have co-operated in collecting information on the nectar producing flora of Western Australia, to provide as much of this knowledge as possible for beekeepers. Many beekeepers have also co-operated in this work by adding information from their records and personal experience.

The material in this article has therefore been collected by the joint effort of the Department of Agriculture and the beekeeping industry over many years. Encouragement and help have also come from the Forests Department.

While this information has been gathered at every opportunity it is far

from complete; there is still much to learn about the honey flora of Western Australia.

This State is unique in the number and variety of its flowering plants, which total some 7,000 species. Collecting flowering details of these is a major project which beekeepers can help by adding further information to this store.

The table and chart in this article are no more than a guide for the commercial beekeeper, as it is impossible to define the exact distribution of the honey plants in this space. Nor is it possible to give much indication of seasonal variations in flowering times and nectar flows.

The commercial beekeeper should make sure his bees are on a pollen flow. The honey crop then comes almost automatically.

Honey Flora Table

COMPILED BY R. S. COLEMAN, APICULTURAL SECTION, WITH ASSISTANCE FROM THE BOTANICAL BRANCH

Common Name	Botanical Name	Distribution	Honey		Quality of Pollen	Flowering Time	Remarks
			Quality	Quantity			
Brown Mallet; or Yate Mallet (2020)*	<i>Eucalyptus astringens</i> Maiden	Brookton-Peringillup, Gnowangerup - Ravensthorpe - Hopetoun. Mainly on lateritic soils	Good	Good	Good	Sept.-Dec. in north; in south, late winter	The honey resembles York-gum honey. In most areas the native forests have been destroyed and only planted stands remain.
Powder-barked Wandoo (2923)	<i>E. accedens</i> W. V. Fitzgerald	Arrino - Pingelly, Dwarda - Werribee, Coates Siding, Cut Hill. Lateritic soils	Excellent....	Excellent....	Excellent....	Mid-Jan., mid-Mar.	An excellent building flow. Gives a good yield, and bees do well on it. Although the tree drops many buds this does not seem to decrease yield. Takes about three years from new growth to flowering. Identification is easy in a mixed forest because the trees are salmon-coloured in early autumn to mid-winter.
650 Peaked Crown Top Mallee or Kangaroo Island Mallee	<i>E. anceps</i> (R. Br.) Blakely	Stirling Range-Ravensthorpe-Esperance-Salmon Gums	Good	Good	Good	Jan.-Feb.-Mar.	Growth of buds takes 2 to 3 years.
Open-Fruited Mallee	<i>E. annulata</i> , Benth.	Southern Mallee area. Salt River, Phillips River, Gnowangerup, Stirling Range, Grass Patch, Salmon Gums	Useful	Useful	Useful	Oct.-Dec.	Not well known.
Mirret; Mealy Blackbutt; Blue Snap and Rattle	<i>E. celastroides</i> , †Turcz.	Widespread in the Mallee area from Tammin, east of Kalgoorlie, Grass Patch-Ongerup	Good	Good	Poor or none	Varies	<i>E. celastroides</i> , <i>E. calyogona</i> , and <i>E. gracilis</i> , are closely related and have crossed extensively, thus the flowering times vary from district to district (Apl. in Circle Valley, Aug.-Oct. in Coolgardie, Oct.-Dec. in Ongerup). The nectar collected is apparently very dense, as the bees need up to 2 pints of water a day on this flow.
Yate (2846)	<i>E. cornuta</i> , Labill.	Extends from the Vasse River to Dalyup and perhaps further. Stirling Range and Frankland River	Excellent....	Excellent....	Good	Late Dec.-Feb.	One of the first grade or choice honeys; as it grows on good soils, has been almost cut out.
River Gum or River Red Gum (3002)	<i>E. camaldulensis</i> , Dehn.	Water courses and flood plains of the North-West and north of the State	Good	Good	Good	Nov.-Dec.	Closely related to <i>E. rudis</i> , the flooded gum of the South-West.
Silver-topped Gimlet (2015)	<i>E. campaspe</i> , S. Moore	Eastern Goldfields	Useful	Useful	Useful	Nov.-Jan.	This tree has not been worked by commercial beekeepers.
Gooseberry Mallee	<i>E. calyogona</i> , †Turcz.	Widespread in the Mallee areas	Good	Good	Good	Varies	<i>E. celastroides</i> , <i>E. calyogona</i> , and <i>E. gracilis</i> , are closely related and have crossed extensively, thus the flowering times vary from district to district (Apl. in Circle Valley, Aug.-Oct. in Coolgardie, Oct.-Dec. in Ongerup). The nectar collected is apparently very dense, as the bees need up to 2 pints of water a day on this flow.

Rough-fruited Mallee (2780)	<i>E. corrugata</i> , Luehm.	Widespread in the Mallee areas	Useful	Useful	Useful	Nov.-Jan.	Has not been worked by beekeepers but birds and bees work the flowers.
Marri or Red Gum (2151)	<i>E. calophylla</i> , R. Br.	Widespread in the coastal and forest areas. Commercial areas from Dandaragan-Ongerup and Albany	Good	Excellent....	Excellent....	Feb.-Mar.	One of the major honey plants. New growth to flowers 8-10 weeks; apparently very sensitive to humidity and soil water content. Grows on the better soils. Does not flower when holding a crop of fresh fruit.
Poot or Limestone Mallet, Red Heart (2780)	<i>E. decipiens</i> , Endl.	Moore River to Rockingham. Katanning to Denmark and Stirling Range	Good	Good	Good	Long flowering. Main flow Sept.-Nov.	The trees growing in limestone hills can be confused with the tuart at first glance, but have more blue in the leaves.
Karri (1078)	<i>E. diversicolor</i> , F. Muell.	Karri areas, Karridale, Manjimup, Walpole, Torbay, Porongorups	Excellent....	Excellent....	Poor	During "on" years areas flower throughout the year	Karri is one of the heaviest and longest flows in the world. It is not unusual for beekeepers to average 3 to 4 cwt. over large commercial apiaries. Given ideal conditions, the karri flowers every 5 years, but it is sensitive to hot summers and low winter rainfalls. Fires can retard or hasten flowering, depending on the stage of maturity of buds or fruits. Buds take 2 to 3 years to mature.
White Mallet (2780)	<i>E. falcata</i> , Turcz.	Southern Mallee and southern coastal areas	Good	Good	Good	Nov.-Dec.	Has not been worked extensively by commercial beekeepers.
Smooth-fruited Mallet (2780)	<i>E. falcata</i> , var. <i>ecostata</i> , Maiden.	Hopetoun	Good	Excellent....	Good	Nov.-Dec.	Has not been worked extensively by commercial beekeepers.
Yellow Tingle (2755)	<i>E. guilfoylei</i> , Maiden	Southern forest area, grows mainly in the hollows	Good	Good	Good	Dec.-Jan.	Found in small areas, produces best during a hot rather dry summer, in two-year periods.
Grey Gum (2846)	<i>E. griffithsii</i> , Maiden	Eastern Goldfields area on flats that border or could become salt flats	This mallee has the characteristics of a honey producer and is worth investigating. Time of flowering at present unknown, probably May-Aug.
Blue Mallet	<i>E. gardneri</i> , Maiden	Gravelly, laterite soils in the wetter Mallee areas in the South-West	Excellent....	Good	Excellent....	May-Sept.	Irregular time of flowering. Nectar produced at end of flowering period, probably due to rain washing out the nectar.
Tuart (1096)	<i>E. gomphocephala</i> , D.C.	Limestone soils, i.e., tuart sands, Moore River-Busselton	Good	Excellent....	Poor	Mar.-Apl.	The bud of the tuart is attacked by a borer and only in hot summers do the buds survive. From new growth to flowering takes 3 years.
Yorrel; Snap and Rattle; Small-budded Mallee	<i>E. gracilis</i> , †F. v M.	Widespread mallee throughout southern Australia	Good	Good	Poor	Varies according to district	<i>E. celastroides</i> , <i>E. calyogona</i> , and <i>E. gracilis</i> , are closely related and have crossed extensively, thus the flowering times vary from district to district (Apl. in Circle Valley, Aug.-Oct. in Coolgardie, Oct.-Dec. in Ongerup). The nectar collected is apparently very dense, as the bees need up to 2 pints of water a day on this flow.
Mountain Marri	<i>E. haematoxyton</i> , Maiden	Restricted areas. It is only around Capel that commercial areas exist. Western slopes of the Darling Scarp. Perth to Yongarillup	Useful	Useful	Useful	Mid-Jan.-Feb.	This tree is easily mistaken for a stunted marri, and has been described by a beekeeper as a "marri with a touch of jarrah."
Lerp Mallee	<i>E. incrassata</i> , Labill.	Widespread in southern Mallee areas	Good	Good	Good	Autumn	Not often worked by beekeepers in this State. There seems to be a spread in the flowering times; this may be due to beekeepers confusing <i>E. incrassata</i> with <i>E. incrassata</i> var. <i>angulosa</i> .
Ridge-Fruited or Giant Angular Mallee	<i>E. incrassata</i> var. <i>angulosa</i> Benth., or <i>E. angulosa</i> , Schau.	Widespread in the Mallee areas	Excellent....	Excellent....	Excellent....	Oct.-Dec.	An important honey plant in S.A. It will probably be important in W.A. when it is worked more by bee farmers.

* Figures in brackets are numbers of Department of Agriculture Bulletins in the "Trees of Western Australia" series, in which these trees and their distribution are more fully described.

† These species are hard to separate and have been treated here as a single species.

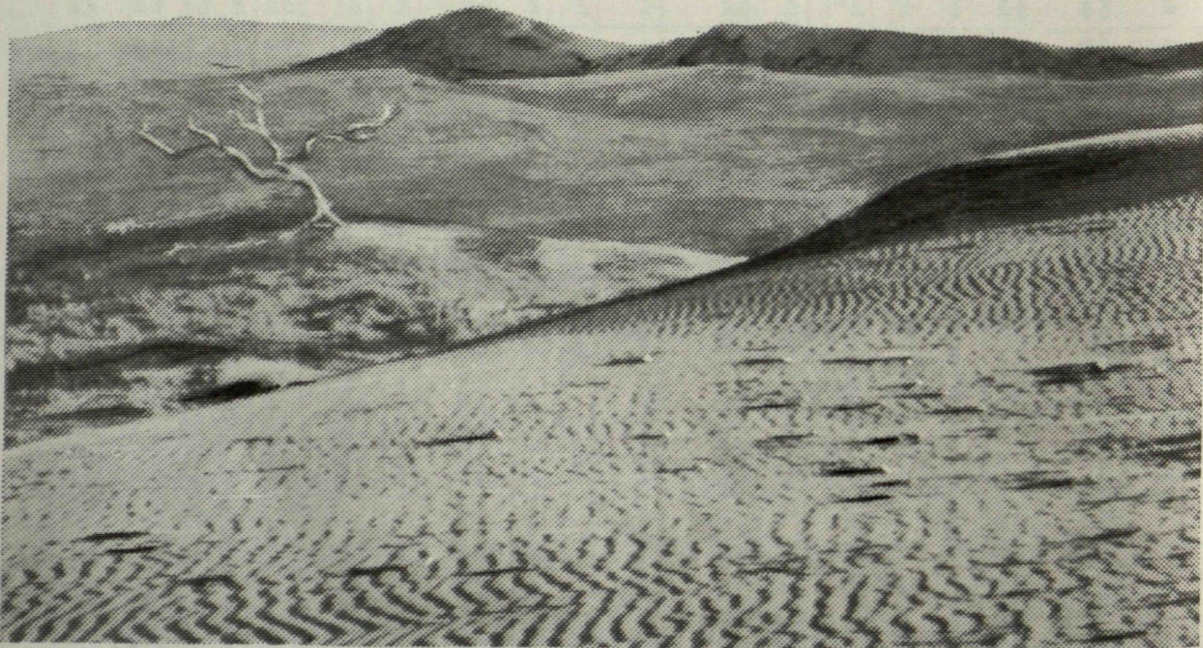
HONEY FLORA TABLE—continued

Common Name	Botanical Name	Distribution	Honey		Quality of Pollen	Flowering Time	Remarks
			Quality	Quantity			
Red Tingle (2064) ...	<i>E. jacksonii</i> , Maiden ...	Southern rain-forest on deep red loam in hilly country	Excellent...	Excellent...	Good ...	Jan.-Mar.	Only small areas exist but is a good producer. Flowering every 4 years under ideal conditions.
Kalgan Mallee ...	<i>E. kalganensis</i> , Maiden.	Kalgan plains	Good ...	Very poor	Good ...	Nov.-Feb.	Not often worked. One beekeeper reported a heavy, oily persistent taste in the honey from this tree.
Marlock or Salmon White Gum	<i>E. lane-polei</i> , Maiden.	Yellow, sandy gravelly soils south of Perth-Pinjarra, Dryandra, West Arthur area	Useful ...	Useful ...	Useful ...	July-Dec.	Small concentrations only, therefore not a flow for a commercial beekeeper. Bees work the flowers for pollen and nectar.
Slender-leaved White Mallee	<i>E. leptophylla</i> , F. Muell.	Widespread	Good ...	Poor ...	Useful ...	Jan.-Feb.	Almost useless for bees, very showy plant with masses of flowers, but very little if any nectar stored from this source.
York Gum ...	<i>E. loxophleba</i> , Benth.	Widespread	Very good medium amber	Excellent...	Poor ...	May-Dec.	The main flow is Sept.-Dec., and seems to need hot weather. Usually flows every two years on the alternate year to <i>E. rudis</i> ; buds take about 10 months to mature.
Jarrah (1078) ...	<i>E. marginata</i> , Sm. ...	Main forests, within the 30 isohyet	Medium ...	Good ...	Excellent...	Sept.-Jan.	Foresters divide the jarrah into several varieties for timber and locality purposes. The beekeeper also finds jarrah varies in nectar and time of flowering. Capel to Bakers Hill flowers in Oct.-Nov.-Dec., as does the coastal jarrah. The jarrah in the karri country flowers a little later, and the jarrah with a thin leaf north of Bakers Hill flowers Dec.-Jan.-Feb. The first setting of buds after a fire usually flower a fortnight later than other trees in the same district.
Bullich (2660) ...	<i>E. megacarpa</i> , F. Muell.	Southern forest areas, swampy land and moist sandy loam near the coast, water-courses and wetter slopes of hills	Useful ...	Useful ...	Useful ...	Oct.-Nov.	This species is seldom concentrated enough to be a crop-producing tree and must be regarded mainly as a building flow for the bees.
Swamp Yate or Flat-topped Yate (2020)	<i>E. occidentalis</i> , Endl.	South and south-west of the State on clay loam soils	Excellent...	Good ...	Good ...	Apl.-July ...	Recognised as a good nectar flow, but because it flowers in the winter or early autumn, the honey crop is uncertain. Often flowers every year.
Redwood (2064) ...	<i>E. oleosa</i> , F. Muell. var. <i>glauca</i> , Maiden	Widespread in the Mallee areas, south of Comet Vale and Westonia	Good ...	Good ...	Good ...	June-Oct.	A showy tree. Individual trees tend to start and finish flowering within about 4 weeks, but within an area the trees will flower over several months.
Morrell (2064) ...	<i>E. oleosa</i> , var. <i>longicornis</i> , F. Muell.	Widespread	Good ...	Good ...	Good ...	Jan.-Mar.	A good honey producer, but difficult to find in large enough areas for commercial production.
Bell-fruited Mallee (2660)	<i>E. preissiana</i> , Schau.	South coastal districts between the Stirling Range and Stokes Inlet	Useful ...	Useful ...	Useful ...	Flowering mainly in winter	Scattered amongst other mallees and has not been worked by commercial beekeepers.
Blackbutt, often called the Forest Blackbutt	<i>E. patens</i> , Benth.	Deep sandy moist soils in the wetter areas	Poor ...	Good ...	Excellent...	Jan.-Feb.	This tree is an excellent builder of hives rather than a producer of honey. The honey is dark, not unpleasant, but the pollen is good. Buds and flowers in the same season.
Crown-topped or Capped Mallee (2755)	<i>E. pilcata</i> , W. F. Blakely	Ravensthorpe to Salmon Gums	Useful ...	Useful ...	Useful ...	Varies; Apl.-Nov.	This tree is known to produce but has not been worked extensively. It flowers at various times in different districts.

Moort	<i>E. platypus</i> , Hook.	Widespread in wetter and southern Mallee areas on moist sandy loam flats and depressions	Excellent...	Excellent...	Excellent...	Nov.-Jan.	One of the better flows, often starts and finishes abruptly.
Flood or Flooded or River Gum	<i>E. rudis</i> , Endl.	Grows on watercourses and flood plains	Good	Good	Excellent...	May-Nov.	Flowers in the winter in the south, and is not very important for this reason. North of Perth, and in the farming areas with other flows, it can be valuable to help build up hives.
Wandoo or White Gum	<i>E. redunca</i> , Schau., var. <i>clata</i> , Benth.	Coorow to Coolgardie, Great Southern and wheatbelt	Excellent...	Excellent...	Poor	Varies according to district	The major honey flow in Western Australia. Approximate flowering times: Coorow to Great Eastern Highway—Mar. to June, becoming gradually later going south from the highway to Wandering-Boddington; south from Wandering-Boddington—Jan.-Feb. Trees on hills usually flower before those on the flats, and drainage systems also affect flowering times.
Salmon Gum (2007)	<i>E. salmonophloia</i> , F. Muell.	Widespread, Mullewa to Ravensthorpe, wheatbelt and Mallee country	Poor and thin	Uncertain	Poor	Varies according to district	In the dry areas it flowers Oct.-Nov. and in the wheatbelt during the winter.
Gimlet (2015)	<i>E. salubris</i> , F. Muell.	Heavy soils in the wheatbelt and Goldfields districts and Mallee areas	Useful	Useful	Useful	Nov.-Feb.	Gimlet is a well-known tree, but not worked by beekeepers.
Coastal Blackbutt	<i>E. todiana</i> , F. Muell.	Coastal sands	Poor	Good	Good	Jan.-Feb.	Not important in the bush, but where it is left for shade on cultivated land it produces a good crop of honey almost without fail every second year. A popular shade tree.
Hooked Mallee	<i>E. uncinata</i> , Turcz.	Coastal districts of South-West	Useful	Useful	Useful	May-Aug.	Not very well known, but could be a good wintering flow. There has been one report that the honey is very poor.
Peppermint	<i>Agonis flexuosa</i> , (Spreng.) Schau.	Coastal sands, Perth, Busselton	Poor	Good	Useless	Sept.-Oct.	Quite a lot of honey, but with a burning peppermint flavour. It produces every year.
Silky-leaved Blood flower	<i>Calothamnus sanguineus</i> , Labill.	Widespread, particularly on gravel soil and coastal plains	Poor	Good	Good	May-Dec.	Long flowering but with peak of production in Oct. Time alters according to district; a good building flow.
One-sided Bottlebrush	<i>C. quadrifidus</i> , R. Br.	Clay-gravel and clay soils throughout the South-West and coastal plains	Poor	Good	Good	June-Aug.	Long flowering. Dark, poor-flavoured honey; a good building flow.
White Myrtle	<i>Hypocalymma augustifolium</i> , Endl.	Darling Range, Watheroo and coastal plain	Good	Good	Good	Aug.-Sept.	One of the many good spring flowering plants.
Swamp Tea-tree	<i>Leptospermum firmum</i> , (Schau.) Benth.	From Perth to south coast in swamps	Good	Good	Probably poor	Sept.	At Albany it produces a good honey that granulates within two weeks; it has not been worked by commercial beekeepers.
	<i>Melaleuca cuticularis</i> , Labill.	South coastal swamps and Stirling Range	Useful	Useful	Useful	Oct.-Nov.	Not worked by commercial beekeepers.
Chenille Honey Myrtle	<i>M. huegelii</i> , Endl.	Coastal plain, particularly on limestone outcrops	Good	Good	Good	Dec.-Feb.	Not in big concentrations, but even when scattered it carries bees through difficult periods.
Flat-leaved Paperbark or Moonah	<i>M. parviflora</i> , Lindl.	Widespread in swamps throughout the South-West	Good	Excellent...	Good	Late Dec., mid-Jan.	This flow lasts about three weeks. Noted for the abrupt start and finish.
Rottnest Tea-tree	<i>M. pubescens</i> , Schau.	Rottnest Island and stands at odd intervals along the west and south coast	Poor	Good	Good	Feb.-Mar.	Not big enough concentrations for the commercial beekeepers.
Needle-leaved or Round-leaved Paper Bark	<i>M. raphiophylla</i> , Schau.	Swamps and rivers of the South-West	Poor	Good	Good	Oct.-Nov.	An annual flow which varies from district to district. It could be good in conjunction with <i>E. rudis</i> .

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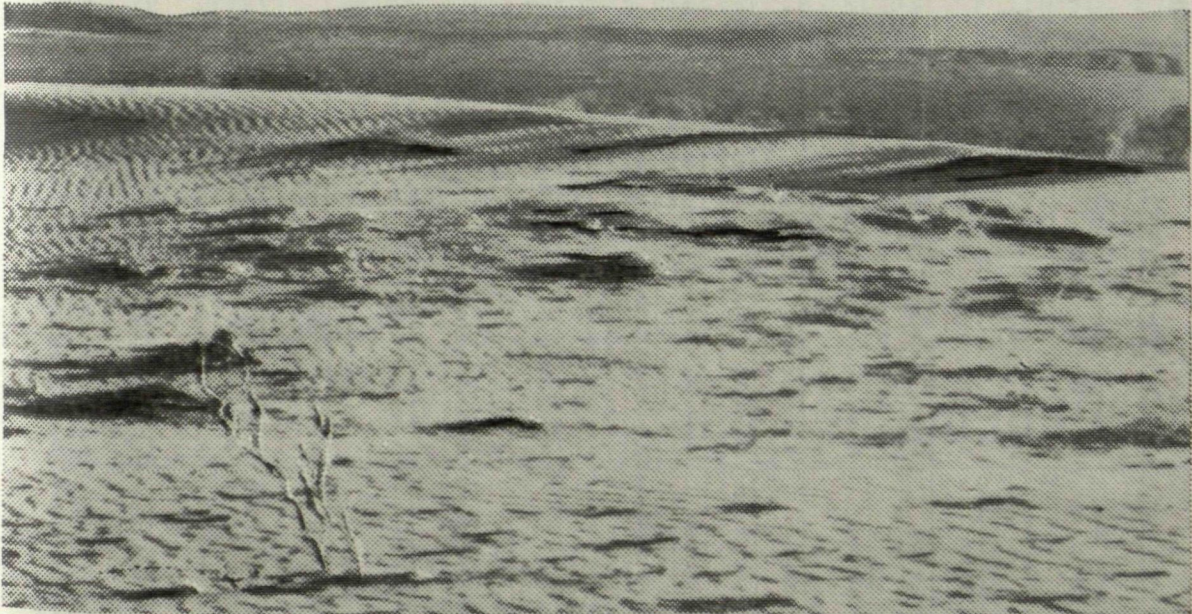
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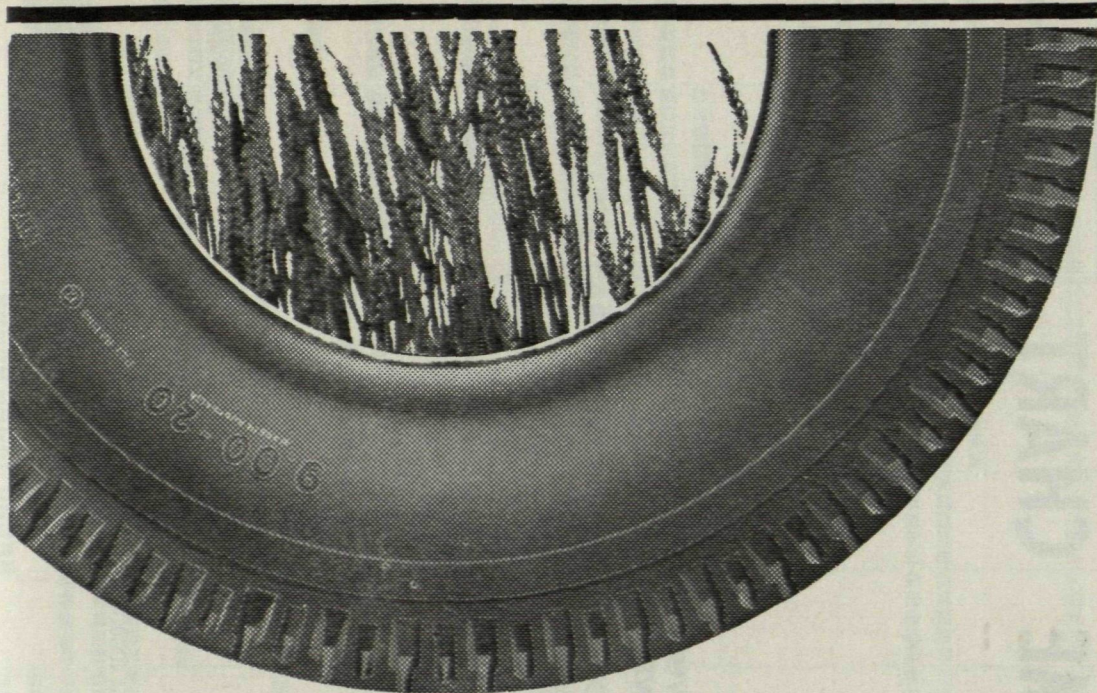
HONEY FLORA TABLE—continued

Common Name	Botanical Name	Distribution	Honey		Quality of Pollen	Flowering Time	Remarks
			Quality	Quantity			
Green Paint Plant ...	<i>Verticordia densiflora</i> , Lindl.	Widespread in the Midland area in sandy and swampy areas	Extremely poor	Good	Good	Nov.-Dec.	A honey to be avoided. It gels in the comb and cannot be extracted by ordinary means.
Sweat Bush ...	<i>Adenanthos cuneata</i> , Labill.	Southern sand plain	Good	Good	Good	Spring	Not very well known. Could be an excellent spring flow.
Yellow Banksia ...	<i>Banksia attenuata</i> , R. Br.	Widespread in the poorer sands on the coastal plain, Midlands, and south coast	Good	Good	Good	Nov-Mar.	The best producer amongst the <i>Banksias</i> although not a high grade of honey.
Ground Banksia ...	<i>B. candolleana</i> , Meissn.	Midland sand plain	Good	Good	Good	May	A good flow if a concentration could be found; probably excellent if associated with another flow.
Bull Banksia ...	<i>B. grandis</i> , Willd.	Widespread from coast to high rainfall wheatbelt	Poor	Good	Good	Sept.-Oct.	A good producer, bridging a gap between parrot bush and jarrah.
Holly Leaf Banksia	<i>B. ilicifolia</i> , R. Br.	Widespread, likes moist depressions in coastal areas	Useful	Useful	Useful	Mar.-Nov.	Not worth shifting onto, but helps to keep bees going on fixed sites.
Swamp Banksia ...	<i>B. littoralis</i> , R. Br.	Grows along creeks and swamps on coastal plains	Useful	Useful	Useful	Mar.-Apr.	Good if in a big concentration.
Red or Menzies Banksia	<i>B. menziesii</i> , R. Br.	Coastal plain north of Pinjarra	Good	Good	Good	Mar.-Aug.	Not a regular flow; flowers every year but does not produce every year.
Orange Banksia ...	<i>B. prionotes</i> , Lindl.	Sandy soil in South-West Division	Good	Good	Good	Feb.-June	Apparently <i>B. prionotes</i> only produces in the northern portion of its range.
	<i>B. pulchella</i> , R. Br.	South coast east of Albany	Useful	Useful	Useful	Whole year	Not much known about this plant, but its flowering time could make it important.
Fox Banksia ...	<i>B. sphaerocarpa</i> , R. Br.	Widespread	Very poor	Poor	Poor	May-June	A very poor honey producer.
Fig Flower, Couch Dryandra, Ground Dryandra	<i>Dryandra nivea</i> , R. Br.	Widespread but varies slightly in appearance in different districts	Good	Good	Good	July	Opinions vary about its ability to produce a honey crop.
Kerosene Bush ...	<i>D. ashbyi</i> , B. L. Burtt.	Northern gravel soils	Good	Good	Good	May-July	<i>D. ashbyi</i> is closely related to <i>D. frazeri</i> , and appears to cross with it. It produces honey while <i>D. frazeri</i> is hardly known as a producing plant.
Prickly Dryandra ...	<i>D. armata</i> , R. Br.	Lateritic soils	Good	Good	Good	June-July	This dryandra is recognised as a good producer but like all dryandras suffers after fires and large areas are now difficult to find.
Pindle or Pingil Bush	<i>D. carduacea</i> , Lindl.	Gravel soils in thick stands	Good	Good	Good	Aug.-Sept.	An old-established flow but is disappearing as a result of fires and cultivation.
Parrot Bush ...	<i>D. sessilis</i> , (Knight.) Domin.	Widespread through the South-West	Good	Excellent	Good	July-mid-Oct.	Possibly the greatest producer of honey in the State as it is an annual producer. It seems to produce better on the coastal limestone hills.
Frasers Dryandra ...	<i>D. frazeri</i> , R. Br.	Badgingarra to Wagin	Good	Good	Good	May-Aug.	While this plant often produces as well as <i>D. ashbyi</i> it is not sought out by the beekeepers. Probably the slightly colder and wetter climate make it a less regular producer than <i>D. ashbyi</i> .
Yellow-flowered Dryandra	<i>D. kippistiana</i> , Meissn.	Midland sand plain gravel soils	Poor	Good	Good	Aug.-Oct.	Usually found with <i>D. sessilis</i> . The honey tastes and smells like silage and is unpalatable.

	<i>Hakea scoparia</i> , Meissn.	Northern and coastal wheat-belt and east to Bullabulling	Good	Good	Good	June-July	A good producer but is sensitive to cold weather.
White Bush or Kangaroo	<i>H. trifurcata</i> , (Sm.) R. Br.	Widespread throughout the South-West	Poor	Useful	Good	June-Aug.	An important plant as it builds up the bees for the <i>D. sessilis</i> flow. Produces a payable crop itself.
	<i>H. lissocarpa</i> , R. Br.	Widespread	Good	Good	Good	June-July	A good yielder, and valuable as a very early spring or late winter flow. This plant is closely related to, and resembles, <i>H. bipinnatifida</i> (honey bush) which is a non-producer.
Reminder Bush	<i>H. recurva</i> , Meissn.	Widespread on the northern and marginal wheatlands and better pastoral areas	Good	Good	Good	May-Aug.	A good plant if in heavy concentrations.
Chittick	<i>Lambertia inermis</i> , R. Br.	Southern sand plain	Good	Good	Good	Flush in Sept.	Flowers most of the year but heaviest in spring.
Honeysuckle	<i>L. multiflora</i> , Lindl.	Widespread on sand plain and Darling Range on gravel soils	Good	Useful	Good	July-Dec.	A good producer but not very reliable. The flowers alter from cream in the Darling Range to red and orange in the Midland sand plain.
Mothers Bell	<i>Leucopogon concinnus</i> , Benth.	Coastal south districts	Good	Good	Good	Apl.-June	A good producer.
White Bell or May Flower	<i>L. conostephioides</i> , D.C.	Widespread	Good	Good	Good	May-July	A very good producer; the bees do not build up on this alone. Some of the <i>Daviesias</i> come into flower a little later and supply pollen; this acts as a building flow.
White Bell	<i>L. oldfieldii</i> , Benth.	Widespread	Good	Good	Good	June-Sept.	A good early spring flowering plant.
White Heath	<i>L. propinquus</i> , R. Br.	Perth-Albany	Useful	Useful	Useful	Mar.-May	Useful only; not a good producer.
White Heath	<i>L. racemosus</i> , D.C.	Perth area	Useful	Useful	Useful	May-June	Useful only.
Tassel or Umbrella Plant	<i>L. verticillatus</i> , R. Br.	Perth-Albany	Useful	Useful	Useful	Sept.-Oct.	Useful only.
White Clematis	<i>Clematis pubescens</i> , Hueg.	Widespread	Useful	Useful	Excellent	Aug.-Nov.	A very good pollen plant.
Wild Hop	<i>Chorilaena hirsuta</i> , Benth.	Part of the hazel thickets in the karri forests	Good	Good	Good	Nov.-Dec.	A marmalade-tasting honey. Is a good over-summer store for hives permanently in the area. Flowers are pendulous and can be worked during rainy weather.
Blackboy	<i>Xanthorrhoea preissii</i> , Endl.	Widespread	Poor	Poor	Useful	Nov.-Dec.	A poor honey; usually flowers well after a fire.
Xmas Tree	<i>Nuytsia floribunda</i> , (Labill) R. Br.	Widespread	Poor	Good	Excellent	Nov.-Dec.	One of the best building flows.
Soap Bush	<i>Trymalium spathulatum</i> , (Labill) Ostf.	Part of the hazel thickets in the karri forest	Good	Good	Good	Nov.-Dec.	Wild hop and soap bush flower together in the same areas.
Prickly Moses	<i>Acacia pulchella</i> , R. Br.	Widespread	None	None	Good	Aug.-Oct.	A very good pollen plant.
Diamond Bush	<i>Bossiaea laidlawiana</i> , Tovey et Morris	Karri forest	Good	Good	Excellent	Sept.-Nov.	Bees build up well on this plant. A good honey.
	<i>B. ornata</i> , (Lindl.) Benth.	Widespread in the South-West	Useful	Useful	Good	Sept.-Oct.	Spring flowering.
Water Bush	<i>B. aquifolium</i> , Benth.	Widespread in the South-West in the hilly country, Perth to Bunbury	Useful	Useful	Good	July-Sept.	Spring flowering.
Staghorn	<i>Daviesia epiphylla</i> , Meissn.	Widespread	Good	Useful	Good	Apl.-Oct.	Spring flowering.

HONEY FLORA TABLE—continued

Common Name	Botanical Name	Distribution	Honey		Quality of Pollen	Flowering Time	Remarks
			Quality	Quantity			
	<i>D. incrassata</i> , Sm.	Widespread	Useful	Useful	Useful	Aug.-Oct.	Spring flowering.
Broom Daviesia	<i>D. juncea</i> , Sm.	Widespread	Good	Good	Excellent....	June-Sept.	Early winter flow of nectar. Good pollen.
Prickly Poison	<i>Gastrolobium spinosum</i> , Benth.	Widespread on lateritic soils	Useful	Useful	Useful	Sept.-Oct.	Spring flowering.
Stinkwood	<i>Jacksonia furcellata</i> , (Bonpl.) D.C.	Widespread on coastal sand plain	Useful	Useful	Good	Oct.-Dec.	May be a good producer in concentrated stands.
Stinkwood	<i>J. sternbergiana</i> , Hueg.	Widespread	Useful	Useful	Useful	Oct.-Mar.	Produces a constant amount of pollen, but only a trickle of honey.
Native Willow	<i>Oxylobium lanceolatum</i> , (Vent.) Druce	Rivers in the extreme South-West	Good	Useful	Good	Sept.-Nov.	Uncertain producer, more important for pollen than nectar.
Box Poison	<i>O. parviflorum</i> , Benth.	South-West Division	Useful	Useful	Useful	Sept.-Oct.	Spring flowering.
Templetonia or Cockles Tongue	<i>Templetonia retusa</i> , (Vent) R. Br.	South-west coastal areas and isolated patches inland	Good	Good	Good	Mar.-July	Not found in big enough stands to be important to commercial beekeepers.
	<i>Casuarina huegeliana</i> , Miq.	Great Southern	Nil	Nil	Good	July-Aug.	A very early pollen producer.
	<i>C. humilis</i> , Otto et Dietr.	South-West Division	Nil	Nil	Good	Aug.-Sept.	A good pollen producer.
Bull Oak	<i>C. Fraseriana</i> Miq.	Coastal plain	Nil	Nil	Good	July-Aug.	Good pollen. Bees bring in the whole anther, remove the pollen and discard the anther outside the hive. The heap of anthers in front of the hive resembles sawdust.
Pattersons Curse, Salvation Jane, Vipers Bugloss	<i>Echium plantagineum</i> , L.	A weed, or naturalised plant in the wheatbelt and higher rainfall areas	Good	Good	Good	Aug.-Oct.	An excellent honey producer if in big concentrations.
Monterey Pine	<i>Pinus radiata</i> Don.	Cultivated tree	Nil	Nil	Useful	Aug.-Sept.	Wind-borne pollen. Bees work this tree and do well on it.
Guildford Grass	<i>Romulea rosea</i> (L.) Eckl.	A widespread weed	Useful	Useful	Good	July-Aug.	Early pollen producer.
Branched Onion Weed	<i>Anthericum divaricatum</i> , L.	A weed mainly along the coastal sand dunes	Useful	Useful	Good	June-Aug.	A very early pollen producer.
Common Onion Weed	<i>Asphodelus fistulosus</i> , L.	A widespread weed	Useful	Useful	Good	June-Aug.	A very early pollen producer.
Sugar Gum	<i>Eucalyptus cladocalyx</i> , F. Muell.	A cultivated tree	Excellent....	Excellent....	Good	Jan.-Apl.	A heavy honey producer where there are enough trees. Flowers annually. Known to produce up to 1 cwt. of honey a tree each year.
Taylorina	<i>Psoralea pinnata</i> , Linn.	Naturalised plant	Excellent....	Excellent....	Excellent....	Sept.-Nov.	One of the best honeys produced in W.A. ; is a declared weed in the Albany district, so large areas are hard to find.
Capeweed	<i>Arctotheca calendula</i> , (Linn) Levyns.	Widespread	Useful	Good	Excellent....	July-Oct.	One of the best pollen plants. The honey produced has a doughy flavour.
Algaroba or Mesquite	<i>Prosopis juliflora</i> , D.C.	A serious weed in the pastoral area of the North-West	Excellent....	Excellent....	Excellent....	Nov.-Dec.	An introduced plant and serious weed.
Wild Radish	<i>Raphanus raphanistrum</i> , Linn.	A weed of cultivated land and pasture	Good	Good	Excellent....	July-Oct.	A serious weed of cereal crops.



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FLOWERING TIME CHART

KEY

- Heavy or peak flow.
- ▒▒▒▒ Probable time of flow (uncertain).
- ||||| Light flow.

THIS CHART SHOWS THE TIME OF THE FLOWERING AND NECTAR FLOWS OF THE MAIN HONEY PLANTS IN WESTERN AUSTRALIA.

IT IS INTENDED TO BE USED IN CONJUNCTION WITH THE HONEY FLORA CALENDAR AS A GUIDE FOR COMMERCIAL BEEKEEPERS.

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	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<i>Eucalyptus accedens</i>	■■■	■■■■■■■■■■	■■									
<i>E. annulata</i>									▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	
<i>E. anceps</i>			▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒								
<i>E. astringens</i> (Brown Mallet)										■■■■■■■■■■	■■■■■■■■■■	▒▒▒▒▒▒▒▒▒▒
<i>E.</i> " (Yate Mallee)					▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒					
<i>E. campaspe</i>											▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒
<i>E. camaldulensis</i>												▒▒▒▒▒▒▒▒▒▒
<i>E. calycogona</i>							▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	
<i>E. calophylla</i>		■■■■■■■■■■	■■■■■■■■■■	■■■								
<i>E. celastroides</i>				▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒		
<i>E. cornuta</i>	■■■■■■■■■■											■■■■■■■■■■
<i>E. corrugata</i>	▒▒▒▒▒▒▒▒▒▒								▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒
<i>E. diversicolor</i>												
" Albany							▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒			
" Walpole				▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒	▒▒▒▒▒▒▒▒▒▒					

FLOWERING TIME CHART—continued

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<i>E. patens</i>	■■■■■■■■	■■■■■■■■	■■■									
<i>E. redunca</i> var. <i>elata</i>												
" Coorow—Great Eastern Highway			■■■	■■■■■■■■	■■■■■■■■							
" Not continuous, Bolgart-Northam							■■■■■■■■	■■■■■■■■	■■■■■■■■			
" Wandering—Great Eastern Highway— High ground									■■■■■■■■	■■■■■■■■	■■■■■■■■	
" Wandering—Great Eastern Highway— Valleys	■■■■■■■■										■■■■■■■■	■■■■■■■■
" Wandering - Boddington—Cranbrook - Boyup Brook		■■■	■■■■■■■■	■■■								
<i>E. rudis</i>												
" Bunbury-Perth						■■■■	■■■■■■■■	■■■■■■■■				
" Perth-New Norcia							■■■	■■■■■■■■	■■■■■■■■			
" Great Southern Wheatbelt							■■■	■■■■■■■■	■■■■■■■■			
" Dongara									■■■■■■■■	■■■■■■■■	■■■■■■■■	
<i>E. salubris</i>												
<i>E. salmonophloia</i>												
" Wheatbelt												
" Goldfields												
<i>E. todiana</i>												
<i>E. uncinata</i>												
<i>Agonis flexuosa</i>									■■■■■■■■	■■■■■■■■		
<i>Calothamnus quadrifidus</i>												
<i>C. sanguineus</i>					■■■	■■■■■■■■	■■■■■■■■	■■■■■■■■	■■■■■■■■	■■■■■■■■	■■■■■■■■	■■■■■■■■
<i>Hypocalymma augustifolium</i>								■■■■■■■■	■■■■■■■■			
<i>Leptospermum firmum</i>									■■■■■■■■			
<i>Melaleuca cuticularis</i>										■■■■■■■■	■■■■■■■■	
<i>M. huegelii</i>												
<i>M. parviflora</i>	■■■											■■■
<i>M. pubescens</i>		■■■	■■■■■■■■									
<i>M. raphiophylla</i>										■■■■■■■■	■■■■■■■■	
<i>Verticordia densiflora</i>											■■■■■■■■	■■■■■■■■
<i>Adenanthos cuneata</i>												
<i>Banksia attenuata</i>												
<i>B. candolleana</i>												
<i>B. grandis</i>									■■■■■■■■	■■■■■■■■		

FLOWERING TIME CHART—continued

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<i>D. juncea</i>												
<i>Gastrolobium spinosum</i>												
<i>Jacksonia furcellata</i>												
<i>J. sternbergiana</i>												
<i>Oxylobium lanceolatum</i>												
<i>O. parviflorum</i>												
<i>Templetonia retusa</i>												
<i>Casuarina huegeliana</i>												
<i>C. humilis</i>												
<i>C. fraseriana</i>												
<i>Echium plantagineum</i>												
<i>Pinus radiata</i>												
<i>Romulea rosea</i>												
<i>Anthericum divaricatum</i>												
<i>Aepholobium fistulosum</i>												
<i>Eucalyptus cladocalyx</i>												
<i>Psoralea pinnata</i>												
<i>Arctotheca calendula</i>												
<i>Prosopis juliflora</i>												
<i>Raphanus raphanistrum</i>												

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