

"But there are six! Why did you say there were only five?"

And Pierre replied:

"No, wife, there are only five. I have counted them often; one is missing, I tell you."

Then his wife said:

"You see only five, because you are mounted on one of the donkeys. But I can see seven. What a donkey you are."

## WESTERN AUSTRALIAN WILDFLOWERS.

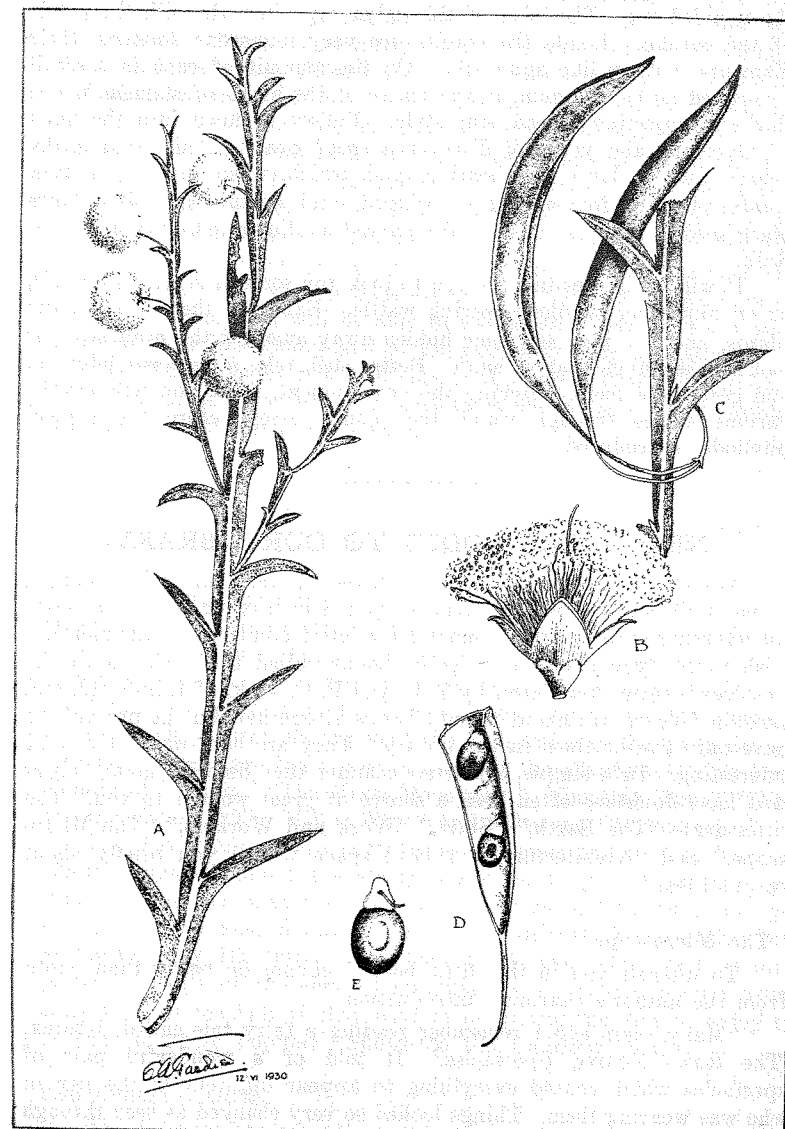
### No. 6: The Comb Wattle.

(By C. A. GARDNER, Government Botanist.)

This wattle, one of the earliest of the winter flowering wattles, is an undershrub (small shrub) common in sandy soils along the western coastal plain, and extending inland as far as the Great Southern Railway. Averaging one to two feet in height, it usually branches from a thick woody stock at the base, the branches being either bushy and erect, or lying carelessly upon the ground with only the tips curved upwards. Its winged stems are green, the leaves being tooth-like, and all set in the one plane like the teeth of a two-sided comb. The flowers are a rich yellow, or a pale yellow merging almost to white.

The comb wattle, like so many other Australian varieties, does not possess true leaves when fully grown. In the seedling stage leaves may be present, and these—the true leaves—are feathery, *i.e.*, divided into numerous leaflets like those of the Bird-of-Paradise shrub, or the Cassia. Quite early in its life the shrub supplements these true leaves by leaves which have a wing-like leaf-stalk and midrib (really a rhachis); and later on, while the plant is still very young, the leaflets entirely disappear, and we have the entire leaf-like organ which is known as a phyllode. It is called a phyllode because it is not a true leaf, but in reality a flattened leaf-stalk and midrib which function as a leaf. Some of you may have noticed something of the kind in the winged leaf-stalk of some citrus trees. Very few South-western Australian Acacias retain their true leaves, but we have common examples in the Karri Wattle and the so-called "Prickly Moses." The greater number of our three hundred odd wattles have these phyllodes, which we commonly call leaves. Perhaps it has never occurred to you that trees like the Jam, the Mulga, the Black Wattle, the Wodjil, and the Manna Wattle do not possess true leaves as we know them; but sometimes when a Jam tree has been cut for posts you will see them sucker, and then you will see the true leaves, delicate and feathery. In our particular wattle illustrated in this number, you will see a curious example of a phyllode. It is not joined to the stem in the usual manner, but on the under side of the midrib it is broader; and although the upper side is normal, the lower surface remains expanded, and continues as a wing down the stem until it meets the next phyllode. Such wattles are the "wing-stemmed wattles." We have four of them in South-western Australia; and, beyond a doubtful species in the Northern Territory, they are confined to this corner of Australia. From the notches in the stems, or places from which the leaves arise,

branches are formed, or sometimes only flowers, but from the point at which a flower has arisen, a branch may later be formed. The "flowers" of our wattle are globular, and resemble fluffy balls, which really represent clusters or heads of from 6 to 10 flowers. Their fluffy appearance is caused by the prominent and very numerous stamens which hide the other organs of the flower. Each so-called wattle flower, therefore, represents a number of small perfect flowers.



*Acacia stenoptera*, Benth.

PERTH W.A. 1930

The Comb Wattle (*Acacia stenoptera*, Benth.)

(A.) Branch with phyllodes and flowers. (B.) Pods. (C.) View of an individual flower. (D.) and (E.) Seeds.

Let us examine one of these flower-heads. If we take a sharp, fine knife or needle we shall have no difficulty in separating the flowers within the flower-head. In the comb wattle we discover a cup-like organ with four (rarely five) petals. It is the small corolla. It is small, but plainly visible to the naked eye, and, of course, is much more distinct under a lens. Outside this organ, and enveloping its base, is another similar, but much smaller, organ—the calyx, represented by a small four-lobed cup. It is very delicate, and only with difficulty seen by the unaided eye. The lobes of this calyx cup alternate with the petals of the corolla. Inside the corolla are very numerous stamens, their filaments looking like spun silk. On the summit of each is a small two-celled anther. Again, in the centre of the brush of stamens is one thicker, projecting thread—the style. Follow it down into the mass of filaments, and you will discover a small ovary. This in time develops into a large seed-bearing pod, which, when ripe, is a rich chestnut-brown, four-angled or winged, and containing fairly large black seeds. The pod is generally curved as illustrated, with a slender stalk.

It will be interesting for you to look for some true leaves on this, or on any other phyllode-bearing wattle. Examine the base of the plants, and you may see some hidden away amongst the branches; or look for seedlings near at hand. Better still, take some seeds later on, and germinate them, watching the development, when you will see the various stages through which the plant passes before the typical phyllode is produced.