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State Herbarium of South Australia
PO Box 2732
Kent Town SA 5071
Australia



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THE IDENTIFICATION OF THE TYPE LOCALITY AND COLLECTOR OF *ACACIA PEUCE* F. MUELL.

R. Grandison

Mataro Road, Hope Valley, South Australia 5090

Abstract

The first possible records of *Acacia peuce* are investigated. It is concluded that while Burke and Wills (1861) saw this species at its northernmost locality, the type collection was collected by Howitt and Murray (1862) at a more southerly site near the present town of Birdsville.

Introduction

In his type description of *Acacia peuce*, Mueller (1863) stated that the specimen on which it was based had been collected by Murray and Howitt from the vicinity of, "Wills' Creek, lat. 25° 30'" (see Fig. 1). There has been some doubt as to where this locality is and even who made the type collection.

Willis (1962) referred to Howitt's journals and showed that during July 1862, Howitt and Murray were in a region near Birdsville where the species is known to occur. Although the name of Wills' Creek does not occur on recent maps of this area, Willis was satisfied that it was the site of the type population.

However, a few years later Cleland (1968) raised doubts about the source of Mueller's specimens in the belief that Howitt did not proceed further north than Cooper Creek. He believed that Wills discovered the species on the expedition with Burke in 1861 (near their Camp 88 close to the Tropic of Capricorn), collected the specimen and that, despite Wills' death on the trip, it was this specimen which eventually reached Mueller.

Consequently, there is some doubt as to the identity of the collector of the type. There is also doubt as to the location of the Wills' Creek to which Mueller referred. The name Wills' Creek is shown on maps some 50 km north of Boulia but, although on the route followed by Burke and Wills, it is far north of any point reached by Howitt and *Acacia peuce* has not been found in the area. It clearly cannot be the Wills' Creek to which Mueller referred.

Acacia peuce is one of the tallest and most conspicuous of the Eremaean *Acacia* species (Fig. 2), and is known from only three small and highly isolated localities (Fig. 3). One site is in the Northern Territory, located about 60 km north of Andado at 25° 05' S, 135° 20' E; a second, in Queensland, is in the vicinity of Mt Lewis (at 25° 50' S, 139° 22' E) near Birdsville; and the third, also in Queensland, is about 370 km north of Birdsville on the Bedourie to Boulia road near Montagu Downs, at 23° 02' S, 139° 18' E. It is unlikely, in view of the conspicuous appearance of the tree, that any further localities have been overlooked. It should, therefore, be possible to determine with some certainty the populations from which Howitt and Murray or Wills could have collected the type.

The Burke and Wills Expedition

As was pointed out by Cleland (1968), from the entry in Wills' journal dated the 8th January 1861, it is evident that Wills saw what today we call *Acacia peuce* at the locality known to them as Camp 88. This locality is close to the Tropic of Capricorn near the present town of Boulia and one of the three known localities of this species.

Wills did not say whether he collected the plant or not, and no collection of plants made by the advance party has ever been recorded. Cleland (1968) attempted to show that

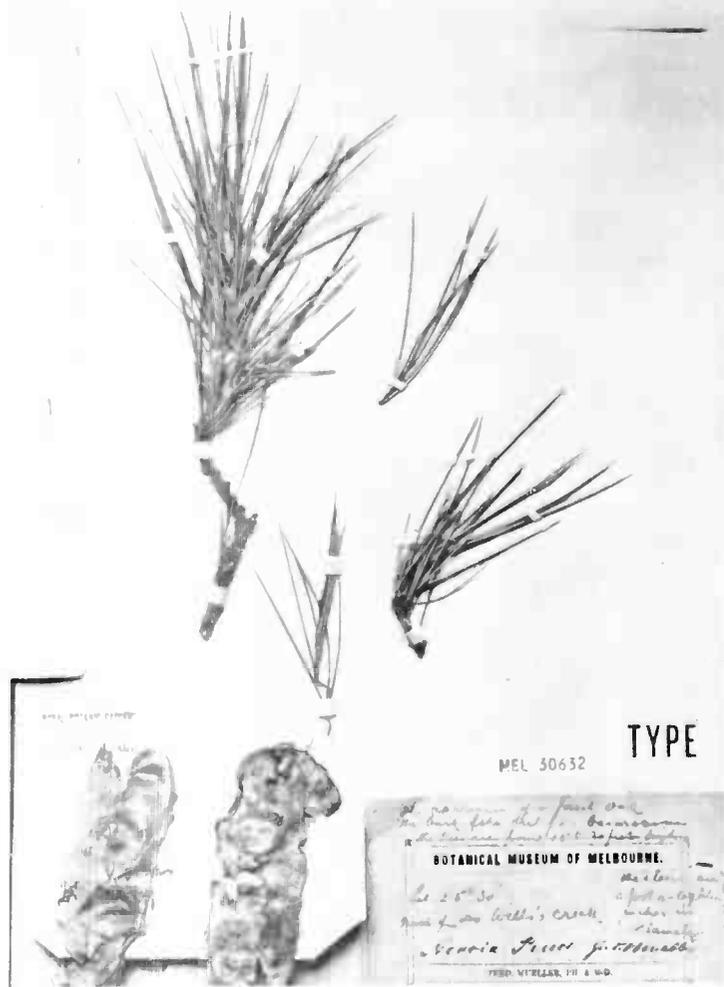


Fig. 1. *Acacia peuce*. Believed to be the type specimen, annotated by G. Bentham: "The appearance of a forest oak. The bark like that of a *Casuarina*. The trees are from 15 to 30 feet high. The stems are a foot to eighteen inches in diameter." (MEL. 30632; photo by B.R. Maslin.)



Fig. 2. *Acacia peuce* near Birdsville.

Wills did collect the type material and at least got it back to Cooper Creek (via the Gulf of Carpentaria!). Were Cleland correct, this would be the only Wills collection known. Why this tree should have been singled out for collection by the exhausted men on their slow return to Cooper Creek in searing heat and having to shed articles to lighten loads, is hard to understand. On the return to Cooper Creek, Wills (in his journal; cf. Wilson & Mackinnon, 1861) stated on March 25th that the country they had formerly traversed near Camp 88 (close to where *Acacia peuce* had been observed) was to the west of their present position, and it is thus unlikely that a collection of the trees was made on the return trip. Before their eventual return to Cooper Creek, Gray died and most of the animals had been slaughtered for food. Howitt rescued the sole survivor, King, and recovered the bodies of Burke and Wills. In his diary he recorded details of what he found, but these did not include mention of any plant specimens (Willis, pers. comm.). These circumstances perhaps support doubts as to whether plant specimens were retained, even if previously collected.

The geographical details of Wills' journal were lithographed in a map by A.J. Stopps, of the Lands and Survey Department, Melbourne, dated 1862. A Wills' Creek is shown on Stopps' map in the vicinity of 26° latitude. Just to the south of Wills' Camp 88 position, a creek was named Wills' Creek by Burke but, as pointed out by Willis (pers. comm.) the use of this name was inconsistently used even by Burke and Wills, therefore the use of this name is not necessarily significant.

The only known locality of *A. peuce* passed by Burke and Wills was the one near Camp 88, the most northerly record known for this species. They did not pass through either of the other localities and there is no evidence that they collected any specimens.

Howitt's expedition

On his first trip in search of Burke and Wills, Howitt travelled no further north than Cooper Creek. However, what Cleland (1968) overlooked is that Howitt, this time accompanied by Murray, made a second trip to the region (Stopps, 1862). After establishing a base camp at Cooper Creek, Howitt made several excursions to adjacent areas particularly to the Diamantina and beyond to a north-western position (Fig. 3) of about latitude 25° 30'S. It seems most probable that it was on this journey that Murray and Howitt collected the type specimens from the Birdsville population.

In July 1862, Howitt had not only returned to the Cooper Creek area to exhume the bodies of Burke and Wills, but was well advanced in carrying out a number of wide-ranging surveys of the area. During July, Howitt was in the vicinity of where Birdsville now stands, and in a segment of his journal dated the 23rd July 1862, and just having left his Camp 74 (on "Wills Creek"), Howitt says,

"This morning I rode across to some sandstone hills visible N 25 W from near the camp and named them after Mr. W.H. Sampson of the Contingent Exploring Party. Found them to be about four miles off and very stony. From the top could see across stony plains for some miles, to another elevation - but whether stone or sand it was impossible to say owing to the haze. In this range I saw a new tree, which resembling a she-oak in appearance - but growing higher and looking disproportional at a distance, like trees seen through mirage. It bears a flat pod containing several hard black seeds."

Although the description of the tree is brief, there can be no doubt that in this region it was *Acacia peuce* to which Howitt referred.

Further to this, William Howitt (father of A.W. Howitt the explorer) wrote a book (1865) that gives an account of his son's activities in the region of where Birdsville now stands. He says,

"From camp 74, latitude 25° 52', longitude 139° 19', Mr. Howitt rode northward to

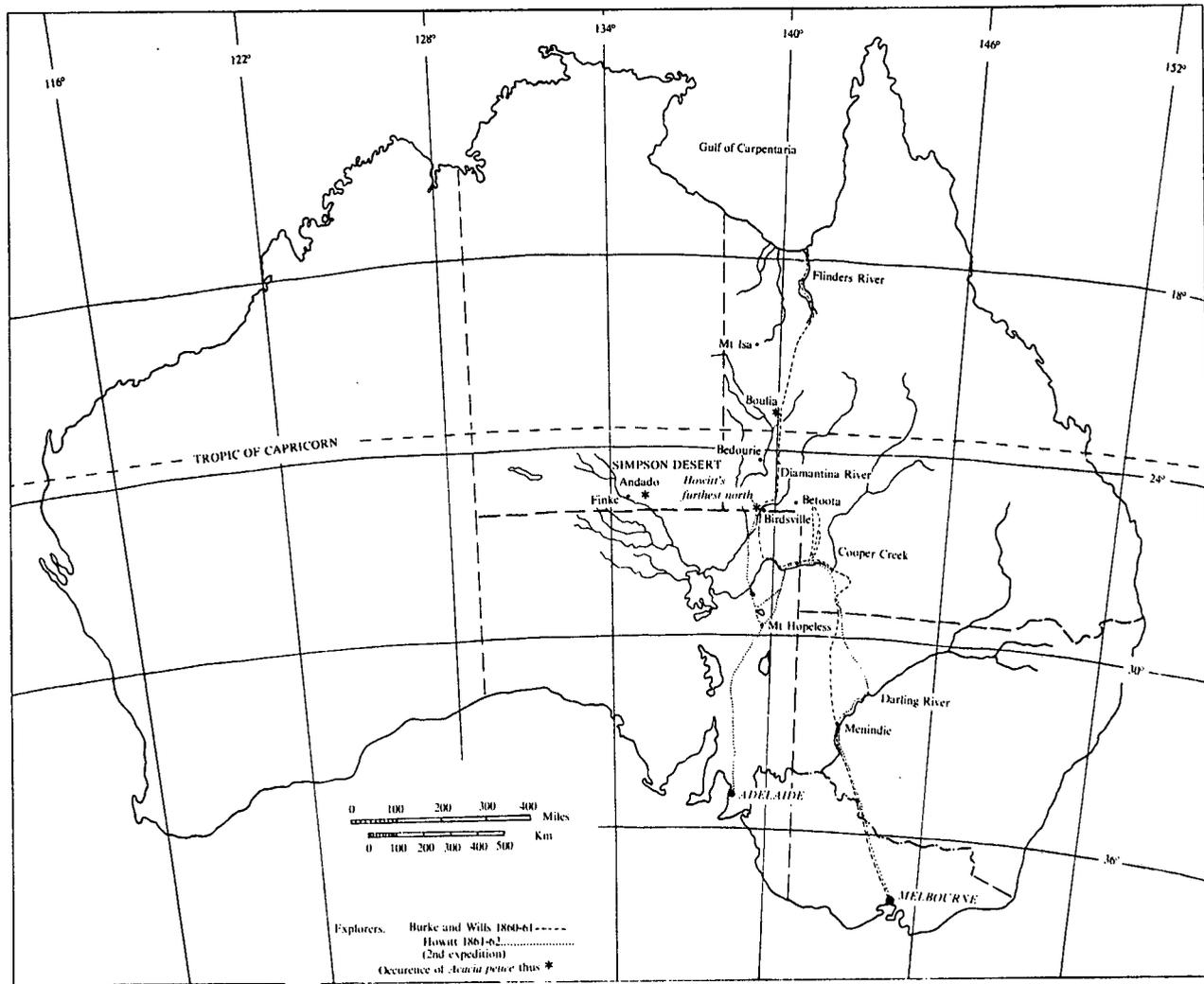


Fig. 3. Map of Australia showing routes of Burke and Wills and of Howitt and occurrences of *Acacia peuce*.

some sandstone hills, which he named Sampson's Range, after Mr. Sampson of the contingent exploring party, and then forward again some miles, where he saw still before him stony plains, with plenty of grass, and beyond them, and from east to west a second stony desert. Returning to the camp, they now set off south again, as their provisions were nearly exhausted."

Not only does this passage mention Howitt's Camp 74 and Sampson's Range (see portion Stopps' map, fig 4A) but most importantly the latitude and longitude of that camp. As Howitt rode several miles to the north, he would have easily reduced the latitude to about 25° 50' and hence come upon *Acacia peuce*. This appears to be in accord with both his description of the trees and the position of Sampson's Range.

Howitt's positioning of latitude and longitude appear to be accurate, so did the 25° 30' shown on the type represent their northern most position before returning south to the camp? All available indications are that this was the case and was considered close enough to the actual locality for the occurrence of *Acacia peuce* to be listed as such.

Specimens collected on this trip, including one of this *Acacia* collected by Murray, (Mueller 1862/63), became part of a collection subsequently sent to Mueller. A report on the botanical collection of Murray, which was presented to both Houses of the Victorian Parliament in the 1862-63 session, included *A. peuce*.

Stopp's map, which included data from the Howitt and Murray expedition as well as from Wills' diary, marked a Wills' Creek at about latitude 26° 10' S (Fig. 4A). Just to the east and north of Wills' Creek are indicated shallow lakes and "swamp box" (*Eucalyptus microtheca*, coolibah). The only stream large enough to support noteworthy clusters of the species of tree in this area is the Diamantina River. As the expedition moved northward from Wills' Creek towards the only area where they could have collected *A. peuce*, they probably passed over the land occupied today by Birdsville. A comparison of Stopp's map with modern maps suggests that Wills' Creek was a segment of the Diamantina. (Fig. 4B).

Summary and Conclusions

There is good reason to believe that Burke and Wills saw *A. peuce* near Boulia in 1861 but, even if they did make a collection, as suggested by Cleland (1968), no specimen is known to have survived. Cleland failed to perceive that Howitt was sent on a second relief expedition in 1862, and his comments regarding the collection of *Acacia peuce* by Wills are questionable.

In the following year Murray and Howitt collected the first specimen still in existence near Birdsville. There is no doubt that this comprises the type specimen cited by Mueller. The Wills' Creek mentioned by Mueller was probably a channel of the Diamantina close to the present town of Birdsville.

The exact locality of the type population is 9½ km (6 miles) north of Birdsville on the Bedourie road and extending about 16 km (10 miles) along the track.

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