

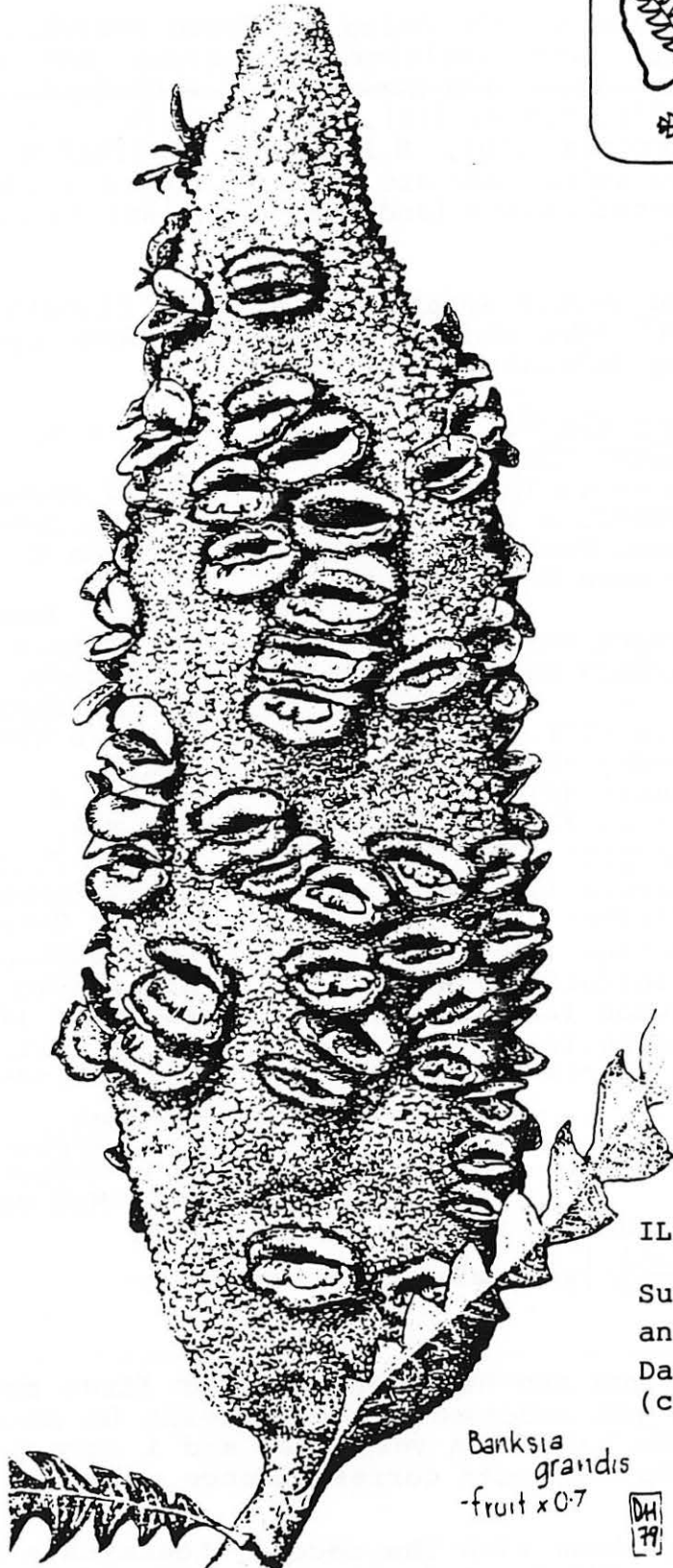
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BANKSIA ATLAS NEWSLETTER

(1) Oct 1984
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NEWSLETTER No.1



EDITED BY
Anne Taylor
October 1984.



Banksia grandis
-fruit x0.7
DH 79

ILLUSTRATIONS BY
Sue Patrick (p.2, 11)
and
David Hutchison
(cover and page 4)

ENQUIRIES TO: Banksia Atlas, W.A. Wildlife Research Centre,
P.O. Box 51, Wanneroo W.A. 6065.

THE FIRST THREE MONTHS, JULY-OCT. 1984

The response to the Atlas has been overwhelming. Some 420 volunteers have registered interest and have been sent recording kits. The numbers for each State are as follows: A.C.T. (25), N.S.W. (19), Tasmania (7), S.A. (2), Queensland (7), Victoria (10), W.A. (350), Northern Territory (0). Many more volunteers are needed in states other than W.A. so State Co-ordinators (and everyone else) please try to spread the word.

Completed record sheets are already flooding in. To date, some 319* sight record sheets have been received from the following 46* contributors -

John Adams (5) W.A.	Bert & Alice Humphreys (2) W.A.
Jennie Allen (50) W.A.	David James (3) W.A.
Mr & Mrs Allen (8) W.A.	Ian Kealley (10) W.A.
Robin Andersson (1) W.A.	Stephen & Meg Le Fanu (3) W.A.
APPM Forest Products (3) Tas	Pattie Leighton (3) W.A.
Bob & Barbara Backhouse (2) W.A.	Peter Mawson (9) W.A.
Greg Barrett (14) W.A.	Alan Moore (6) W.A.
Don & Barbara Bellairs (3) W.A.	R M Mumford (4) W.A.
John Boyle (17) W.A.	Clive & Wendy Napier (6) W.A.
Keith Bradby (9) W.A.	Karen & Michael Palmer (7) W.A.
Mary Bremner (5) W.A.	Grant Pearson (8) W.A.
Neil Burrows (7) W.A.	Terry Powell (6) W.A.
Bruce Champion (10) Tas	Victor Robertson (9) Qld
John Chilvers (5) W.A.	Ed Robinson (1) W.A.
Alison Clifton (1) W.A.	Alf Salkin (5) Vic.
Doug Coughran (5) W.A.	Ed Smidt (7) W.A.
Eileen Croxford (8) W.A.	Peter Smith (7) W.A.
Steve Dawson (2) W.A.	Lois & Andrew Sourry (1) N.S.W.
Harry DeJong (22) W.A.	Tony Tapper (5) W.A.
Howard & Dorrie Gibbs (5) W.A.	Anne Taylor (14) W.A.
Chris Goodsell (1) W.A.	Mr & Mrs Van Rijnswoud (1) W.A.
Mal Graham (10) W.A.	
NSW	
Linley Gueho (2) W.A.	
Rodger Hall (15) W.A.	
Jean Hooper (3) W.A.	

Those of you who have sent in your first record sheets but have not yet received a reply please be patient. The last few months have been very busy and I have not been able to keep up to date with correspondence.

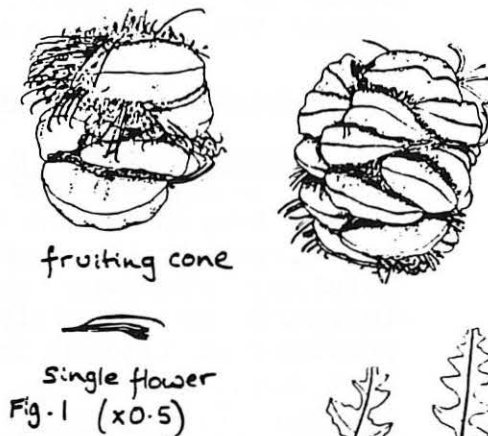
A few problems with the record sheets have become apparent and some additional instructions on filling in the sheets appear on page 6 of this Newsletter.

* [STOP PRESS: These figures refer to the time of compilation (mid Oct.). Since then about 200 more records have been received (mid Nov.).]

Unusual Records

A few have come to light, many more are probably awaiting discovery in the pile of (as yet) unchecked record sheets.

The specimen of B. nutans (fig.1) was found close to Albany, W.A. by John Boyle. To determine whether it was var. nutans, or var. cernuella, measurements were made of flower length, and dimension of seed follicles. The results were as follows: length of style (28-30 mm); perianth (24-25 mm), follicle length (28-35 mm); follicle width (14-20 mm). This places it midway between var. nutans and var. cernuella. It appears that further studies are needed of the status and distribution of the two B. nutans varieties.



The prostrate banksias are obviously going to cause us some problems. The one illustrated in fig 2 was observed by John Chilvers in an area just north of the Stirling Ranges W.A. Some of its leaves are typical of B. repens, others more like B. gardneri. A hybrid or just an odd looking B. repens?

Fig.2.
(0.25)

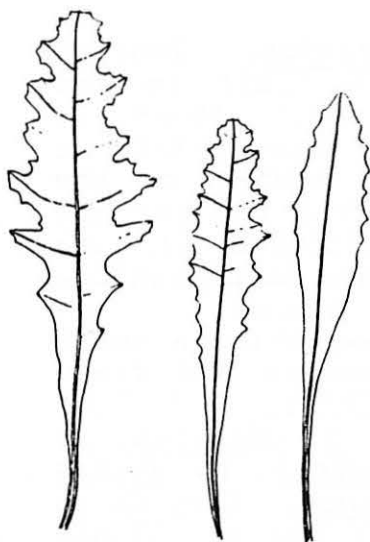
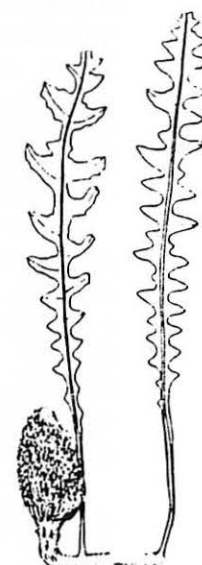


Fig.3.
(x0.25)

Another problematical prostrate banksia (see fig 3) found near Albany W.A. by P Luscombe. Again, some leaves are typical of B. goodii, others more like B. repens. Is it banksia goodii with some leaves gone mad, or a new hybrid?

These leaves of B. gardneri (fig 4) were found near the Stirling Ranges, W.A. by Doreen Davidson. They show unusual form with the leaves divided almost to the mid-rib by the narrowly triangular lobes. Not to be confused with B. blechnifolia which has longer, narrower leaf lobes and is a blue-green colour.

Fig.4. (x0.25)



Paul Spratt (NSW) has found specimens of B. integrifolia var. compar whose flower lengths are smaller than those indicated in the supplementary Field Guide - (style 26 mm, perianth 18 mm).

It all goes to show that there is still a lot to discover about banksias!

Finally, a remarkable record locality on the coast close to Hassel National Park, W.A. and found by Pattie Leighton where no less than 9 species of banksia occur within a single 500 m x 500 m block.

Field Trips/Visits etc. (July-October 1984)

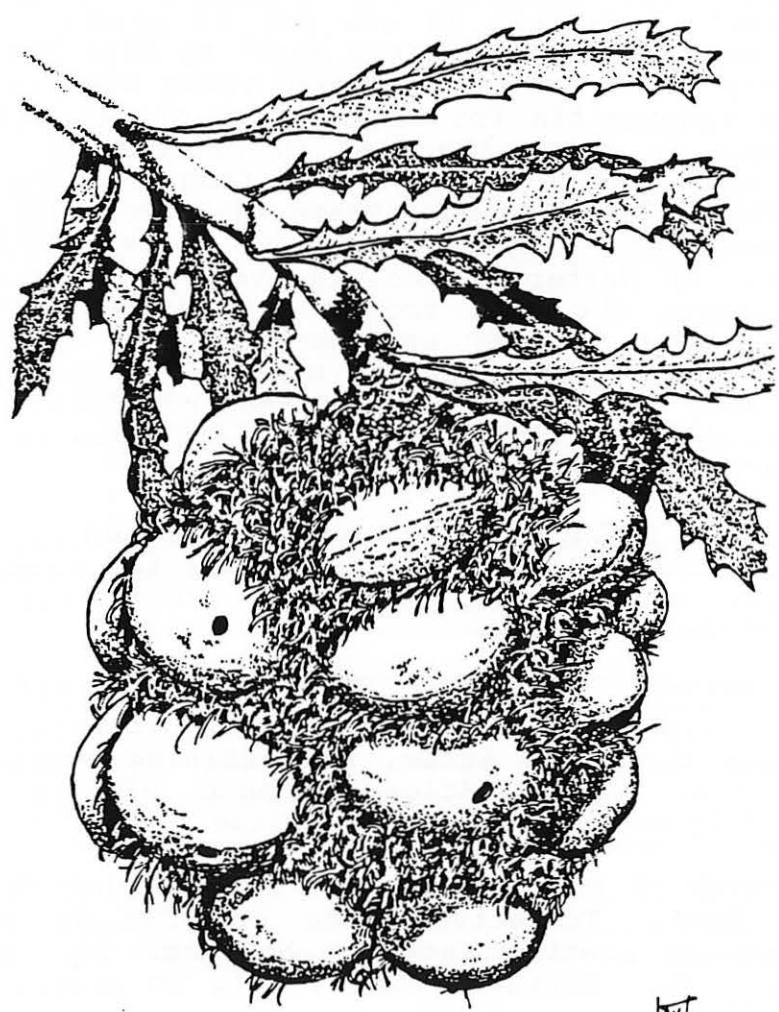
1. Albany Branch, W.A. Wildflower Society. A weekend of lovely sunny weather marked an early August visit to the Albany branch of the W.A. Wildflower Society. After a talk and slide show on Friday evening, a group of about 20 spent Saturday visiting the Banksia "hotspots" around Albany, learning to identify the different species and getting practice at filling in the record sheets. Banksias met with that day included B. attenuata, B. brownii, B. coccinea, B. goodii, B. grandis, B. ilicifolia, B. littoralis var. littoralis, B. occidentalis, B. quercifolia, B. praemorsa, B. verticillata. On Sunday, another group met near the western boundary of Two Peoples Bay Nature Reserve for an interesting 3 hour walk led by Alan Danks, the caretaker reserves officer. Many of the above banksias were seen again, also B. nutans was very abundant. Flower length was measured and found to be perianth 27 mm; style 30 mm. These are very similar to the specimen sent in by John Boyle, and again suggest that the difference between the two varieties of B. nutans is not as clear cut as was previously thought.

2. Fitzgerald River National Park Association. Twertup Field Studies Centre was the base for a visit to the Fitzgerald River National Park Association. About 30 members crowded into the tiny centre, which started life as a quarryman's home and is being rebuilt by members of the Association to be used as a venue for weekend courses and meetings. Twentieth century technology intruded for one night when the Banksia Atlas Video was shown - made possible by the loan of a video and generator by members of the Association. The following day was spent exploring a small area of the National Park. Many record sheets and field notebook pages later, the following banksias had been recorded; B. baueri, B. baxteri, B. caleyi, B. coccinea, B. gardneri var. hiemalis, B. lemmaniana, B. media, N. nutans var. nutans, B. repens, B. speciosa, B. violacea. Many of us were amazed to see just how slowly some of the heathlands regenerate after fire. In areas that had been burnt some 20 years previously, B. media was only .75 m high, while in neighbouring unburnt areas, it was generally at least 2 m.

3. Bunbury Technical College. The college provided the venue for a September evening talk and slide show about the Atlas and a walk in surrounding bushland the following morning. Volunteers learnt to recognise the four types of Banksia which grow here - B. attenuata, B. grandis, B. ilicifolia, B. littoralis var. littoralis and also practised filling in the record sheets. Most volunteers were either from the Bunbury Natural Heritage Society or were forestry cadets studying at the college.

4. Workshop/Training Sessions Around Perth. During September and October, 4 separate workshop/training sessions have been held at different localities around Perth. These have proved enormously popular, with over 70 people attending and a waiting list for further sessions. The emphasis has been on getting practice at filling in the record sheets, but visits have also been made to various parks and gardens particularly noted for their variety of Banksias, where volunteers can learn to identify types of banksia they may not be familiar with.

5. W.A. Wildflower Society - Main branch; Eastern Hills branch; Armadale/Kelmscott Branch. Illustrated talks given to each of these groups.



Banksia Lemnana

DL
86

NEWS ITEMS

1. VOLUNTARY ASSISTANCE IS URGENTLY NEEDED to help me in a variety of tasks e.g. editing record sheets, compiling and sending out kits, writing letters, planning field trips/visits etc., preparing newsletters. If you think you could help in any way please let me know. The experience should be well worthwhile. Anyone able to actually get to the Wildlife Research Centre, Wanneroo during work hours would be especially useful, but there are a few tasks which could be done at home.
2. THE FIRST SET OF INTERIM DISTRIBUTION MAPS is due out late February 1985. To be included, records must be received by December 30th 1984. There will be much editing work to be done during early December - offers of assistance will be much appreciated.
3. A NEW BOOK ON BANKSIAS. Due to the enormous demand from Atlassers for Holliday and Watton's "Field Guide to Banksias", this book is now out of print. However, a brand new book, "The Banksia Book" by Alex George is due out very soon. Alex spent many years studying banksias and is responsible for naming many of the new species. The book is being launched on October 29 1984 after which date it will be available from bookshops (\$29.95) or directly from the publishers, Kangaroo Press (leaflet enclosed, note special offer to Banksia Atlas volunteers). In Western Australia, volunteers will be able to purchase the book from the Wildflower Society for \$19.00. For postage and packing add another \$3.10. Please send requests for the book to the Secretary, W.A. Wildflower Society, PO Box 64, Nedlands 6009. If groups or organizations in other states are able to provide a similar service please let me know.
4. VOLUNTEERS IN VICTORIA. I will be presenting an illustrated talk and workshop session on the Banksia Atlas, December 19 7.30pm at the Burnley Horticultural College, Swan Street, Burnley.
5. OTHER STATES. During the first half of 1985 I hope to visit every State to meet existing volunteers, spread the word about the Atlas, run training sessions, field trips etc. Any Wildflower/Natural History Group who would like me to visit them, please let me know.
6. VOLUNTEERS IN ESPERANCE, W.A. Trip planned for November 10,11 1984. Tentative plans are for an illustrated talk/social evening Saturday November 10. Field trip November 11. Further details will be provided as soon as confirmed.
7. STATE CO-ORDINATORS. All volunteers please send completed record sheets to your State Co-ordinator who will forward them to Perth. Help with identification etc. should also be directed to State Co-ordinators. Requests for volunteers kits however, should be made directly to myself.

State Co-ordinators

N.S.W.
Paul Spratt
10 Stelling Avenue
KANWAL 2259

VICTORIA
Alf Salkin
38 Pinewood Drive
MT WAVERLEY 3149

SOUTH AUSTRALIA
Leslie Gray
19 New York Road
ABERFOYLE PARK 5159

TASMANIA
Bruce Champion
PO Box 1
ROSNY PARK 7018

QUEENSLAND
Paul Taylor
7 Miles Street
BUNDABERG 4670

A.C.T.
Alex George
13 Hawkesbury Crescent
FARRER 2607

WESTERN AUSTRALIA
Anne Taylor
as above

NORTHERN TERRITORY
-

8. Dr Byron Lamont, School of Biology, Western Australian Institute of Technology, is studying the reproductive biology of Banksia elegans, B.chamaephyton, B. tricuspis, B. burdettii in the heathlands north of Perth. Any Banksia Atlas enthusiast who would like to assist, particularly in looking out for pollinators during October-May, please contact Byron at School of Biology, W.A.I.T., Kent Street Bentley 6102. (Ph. 350 7368). Some contribution to transport costs can be provided.
9. WHEN RECORDING IN NATIONAL PARKS etc. - please let the ranger know what you are doing. You never know, he has probably not heard about the Banksia Atlas and may decide to "sign up" himself.

THOSE RECORD SHEETS !

"They take an awful long time to fill in"

"When does an 'old flower' become a 'no flower'?"

"I get confused over latitude and longitude"

"What is a contour line?"

"I'm becoming more observant each time I fill in a sheet. It's making me notice changes in habitat I'd never seen before."

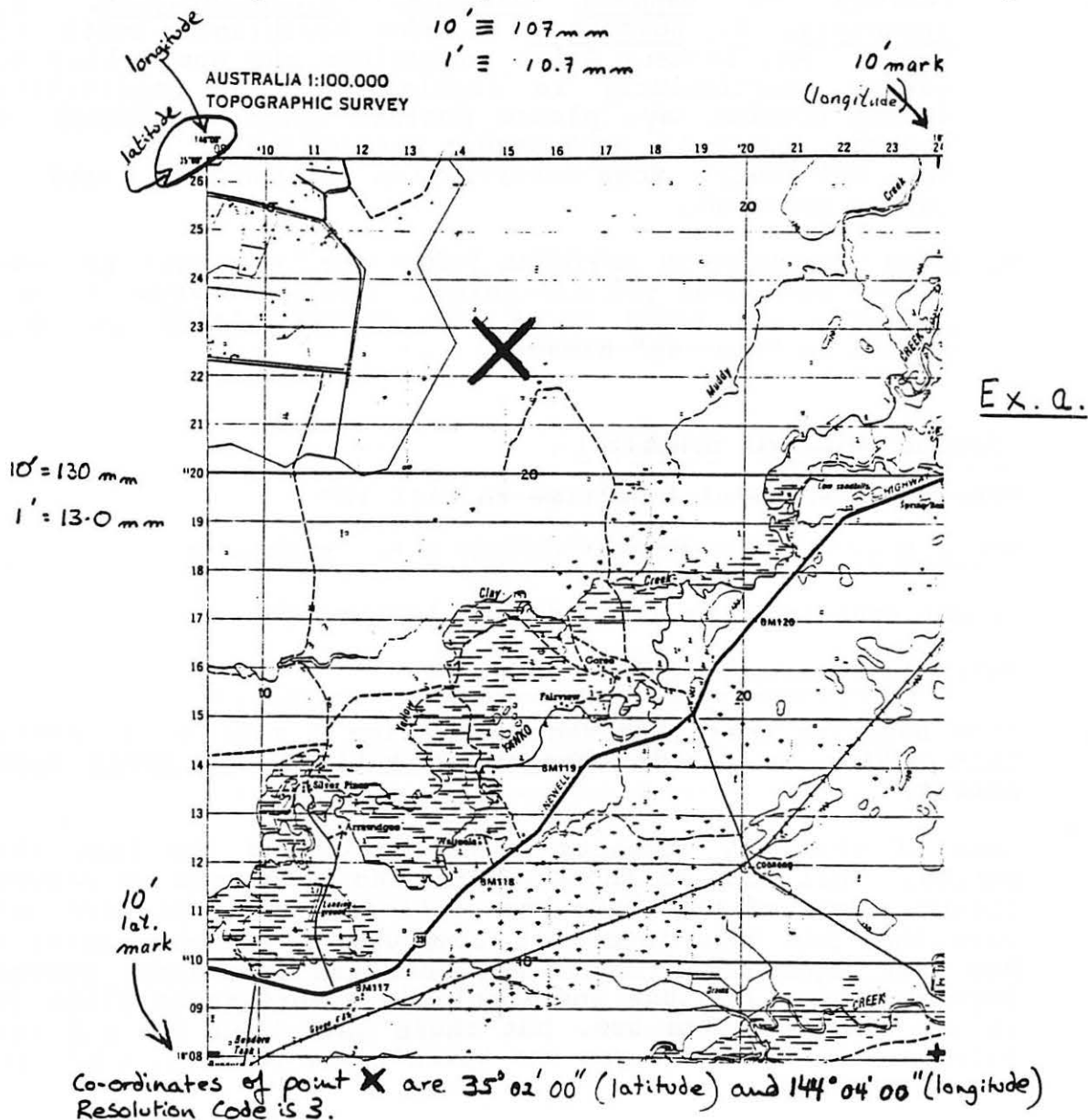
Some of the many comments overheard during the last few months. Well done to those of you who have sent in record sheets. Most of them have been filled in very well and the care that has gone into both observation and presentation has been impressive. There has been the occasional record locality whose latitude and longitude co-ordinates place it in the middle of the sea, but these have been few and far between. For those of you who haven't yet started, don't be

put off by the time taken over your first few sheets. They really do become quicker and easier each time!

The following notes are a supplement to the instructions already given and refer only to those parts of the record sheet that need further clarification.

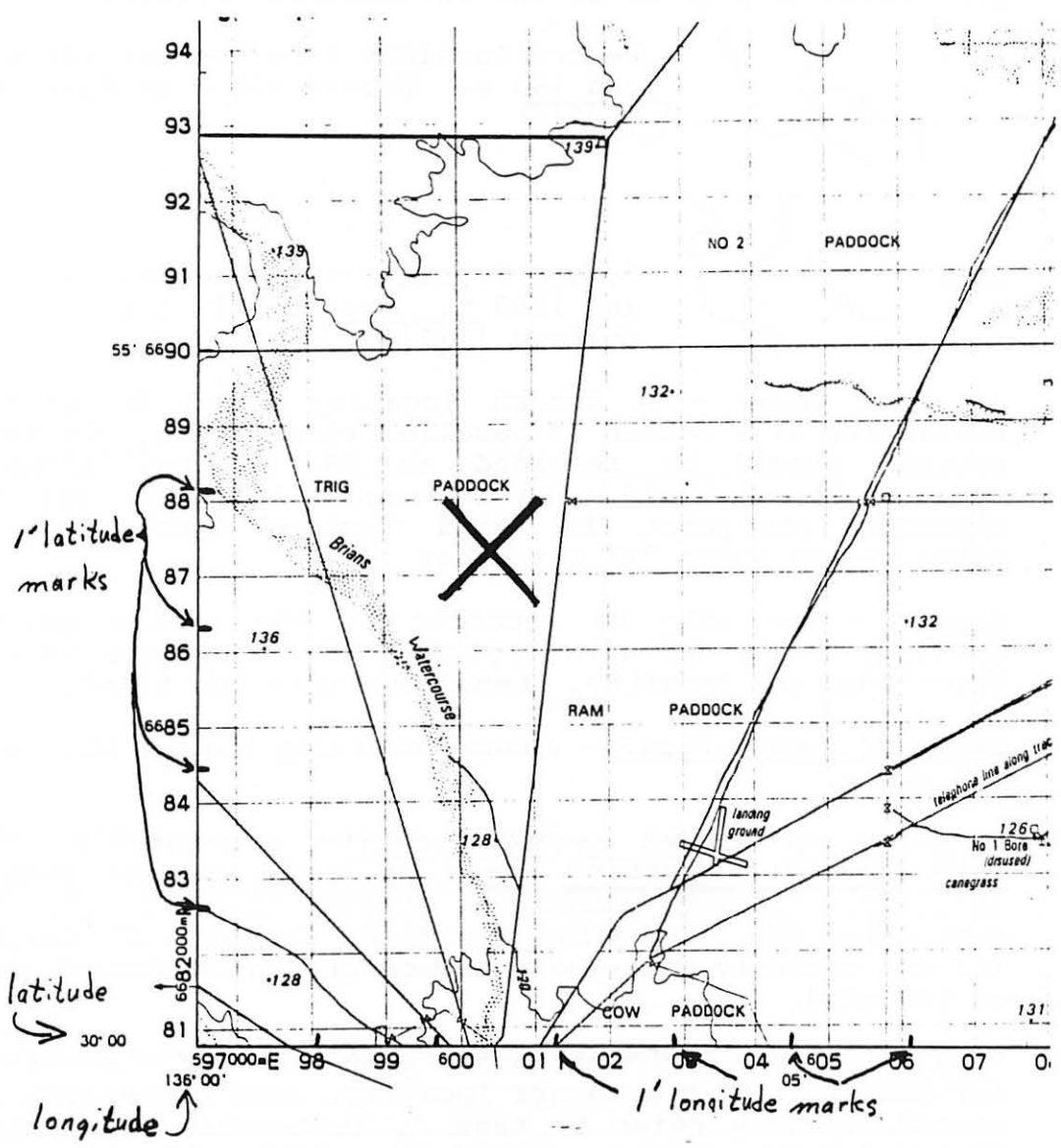
1. Latitude and Longitude. Volunteers in W.A. are provided with a map showing every minute of latitude and longitude. The pictorial example on page 10 of the Instruction Booklet illustrates how to measure latitude and longitude using this map. The lines which intersect at a point south of Stirling Range National Park should have been printed in red - they indicate how to use a ruler (or any straight edge) to measure across to the lines of latitude and longitude. Using this map you can generally only be accurate to the nearest minute ('), in which case the locality resolution code will always be 4.

Other maps can be used and each volunteer is free to choose whichever map he wishes to use. Latitude and longitude are however often more difficult to work out on other maps. For example, with the 1 : 100 000 Natmap



series, there may be only a few points of latitude and longitude indicated along the margins of the map (look for the ° and ' signs). Anywhere in between these points, you will have to use a ruler and some maths to work out latitude and longitude for any record locality (see ex. a). However, on most of these maps every minute is recorded by a small dash. It then becomes a matter of searching along the margins to find a point where the latitude and longitude co-ordinates have been written in, (often the top left corner) then working out the appropriate co-ordinates for each dash (see ex. b).

Ex. b.



Co-ordinates of point X are 29°56'30" (latitude) and 136°02'30" (longitude). Resolution code is 3.

Nearest Named Place etc. Your record locality may actually be at the nearest named place in which case record 0 in box 31 of "Straight Line Distance from Nearest Place".

Reserve or National Park? Only record Y for "yes" if the area is protected for conservation purposes. Such areas have different names in different states e.g. W.A. - Nature Reserve/National Park; Victoria - Wildlife Reserve/National Park; Tasmania - State reserve/Conservation Area/National Park.

Altitude - Contours are lines on a map (generally in brown) indicating wherever land is at a certain height. Thus a 20 m contour line links all places that are at 20 m above sea level.

The following contour sketches match the written examples given on page 14 of the Instruction Booklet.

Ex 1.



Record locality lies between 140 m and 160 m. Record 150 m as follows

1	5	0
---	---	---

Ex 2.



Record locality lies between 1000 m and 1250 m. Record 1125 m as follows

1	1	2	5
---	---	---	---

Landform Codes - A record locality which is gently undulating or a series of parallel ridges (e.g. old dune system) should be recorded as GS (gradual slope). Coastal dunes should also be recorded as GS, but to emphasize the point the words "coastal dunes" can be noted in the space "If x = other"

Aspect - can only be recorded if the entire record locality has a definite aspect. If the aspect varies throughout the locality, then leave this box blank.

Signs of Recent Fire? - means generally within the last 5-7 years.

Dominant species at record locality - generally, the most commonly occurring types of plant at the record locality. Whenever trees are present that are clearly dominating the vegetation structure in terms of height (if not strictly speaking in numbers), these should also be included.

Population Code - the estimated population of a particular banksia within a record locality. (For definition of record locality refer to page 7, Instruction Booklet). If you haven't time to search the entire locality its not difficult to work out an estimate based on only part of the locality. If you find it easier, think of

the 3 population categories, 1-10, 10-100, more than 100, in terms of "rare", "frequent", "very abundant".


Flower code. Due to confusion over terminology the following changes to flower codes have been made:

- B = majority in bud
- F = majority in full flower
- A = recently finished flowers (still with some colour)
- C = flowers absent. Old fruiting cones present
- N = Neither flowers nor cones present

PLEASE NOTE THESE CHANGES ON THE INSIDE FRONT COVER OF YOUR SIGHT RECORD SHEET PAD.

Average Height - Record the most commonly occurring height of the Banksia being recorded. When populations are of very mixed heights, record the average, but also make a note about the mixed heights under "Additional remarks". In the case of two very definite and distinct height classes for the same type of Banksia (possibly due to a fire stimulating seedling regeneration some years previously) use two lines for that particular species and record the two heights one under the other.

Repeat Observations. A question I am frequently asked is "Should I only visit a record locality once, or can I revisit it to check on flowering times, pollinators, etc.?" I suggest that at the first visit a full survey is done and the entire record sheet filled in. Later visits which come up with additional information, e.g. new shoot growth, flowering etc. should be recorded on additional record sheets in the following way



BANKSIA ATLAS — SIGHT RECORD SHEET

Use BLOCK LETTERS to fill in blank boxes inserting one letter per space
 Shaded boxes are "for office use only"
 On dashed lines use own handwriting
 If in doubt about a record, leave space blank.
 Write zero as "0", seven as "7", letter I as "I", letter Z as "Z".

RICIATA NA ESQIAZ 1

LOCALITY

Map used and scale: _____

Latitude: G13411900 Longitude: 1150730

Local Authority code: _____ Name of Local Authority: _____

Nearest named place: _____ Straight line distance from nearest place (km): _____

Uplift: _____ Elevation of location: _____

Region or Nat. Park: _____ Region Name: _____

Repeat number: _____

BANKSIAS PRESENT

Name	Species	Pop. cat.	Flower code	Height	Remarks	Average height (m)	Notes
<u>OIB</u> <i>Banksia var. (Banksia)</i>	<u>LITL</u>	<u>7</u>	<u>3</u>	<u>8</u>	<u>Y</u>	<u>4.5</u>	
<u>OIB</u>							
<u>OIB</u>							
<u>OIB</u>							
<u>OIB</u>							

HABITAT

Within 2 km of Coast? Yes No

Surface Soil: _____ Soil: _____ Vegetation: _____ Aspect of slope: _____

Number of trees: _____ Aspect of slope: _____

Number of shrubs: _____ Aspect of slope: _____

Number of herbs: _____ Aspect of slope: _____

Number of grasses: _____ Aspect of slope: _____

Number of ferns: _____ Aspect of slope: _____

Number of other plants: _____ Aspect of slope: _____

Dominant species in Banksia locality: _____

Additional Remarks: Repeat observation for ATAWAS48211

Repeat observation sheet. Original sight record sheet filled in on Aug. 21, 1984 by Anne Taylor. — note the method for referring to an individual sheet.

Newsletter No. 2 will accompany the first interim set of distribution maps (planned for February 1985). Any contributions from volunteers will be very welcome. Put your literary talents to good use and tell us about the adventures you have had whilst studying Banksias. Any queries you have or further points about the record sheets that you think need to be raised, please let me know.

ADDENDUM

BANKSIA SEMINUDA - previously known as Banksia littoralis var. seminuda but has just been reclassified as a new species. The main differences between the two species (littoralis and seminuda) is in leaf size and shape, and also the overall appearance of the plant. B. littoralis has a narrow linear leaf, 10-23 mm long up to 10 mm wide. B. seminuda has a broader, generally shorter leaf, 5-12 cm long, up to 18 mm wide. The leaves of B. seminuda are generally arranged in whorls of 4-6 around the stem, whereas those of B. littoralis are generally scattered.

In its typical forest habitat along creeks, B. seminuda is usually a straight trunked, well shaped and very tall tree (up to 25 m). However, in more exposed localities the habit may be lower and of more irregular form.

Due to this reclassification, B. seminuda has been allocated a new species code -

B. seminuda = SEM

PLEASE NOTE THIS ON THE INSIDE FRONT COVER OF YOUR SIGHT RECORD SHEETS PAD.

