



ASSOCIATION OF

S.G.A.P. Fern Study Group

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MORE OF CALLIPTERIS PROLIFERA

In the March 1988 issue of our Newsletter Ray Best mentioned losing his plant of Callipteris prolifera syn. Athyrium accedens.

The article prompted a letter from Mrs. H. R. Bosworth of Victoria Estate, via Ingham, who wrote:

"On the front page of the last Fern Study Group Newsletter, Ray Best has a request for a plant of Athyrium accedens. Could you please let him know that I can send him some plantlets of this fern, straight off the fronds, or even a bigger plant. This fern has become almost a weed in my bush house. Self sown spores also come everywhere. The fern grows so big, they just have to be weeded out. It is a beautiful fern, but it does like warmth and moisture. I cannot grow it outside the bush house."

An answer was forwarded to Mrs. Bosworth who responded by forwarding a shoe box half filled with plantlets of Callipteris prolifera and an accompanying letter as follows:

"Enclosed are plantlets of the A. accedens. They don't look very good but should grow if kept moist and warm (to nine feet high). They have gone off since first I wrote. They seem to reach a stage of maturity where they detach from the plant and if they don't find somewhere suitable they wither. These were still sitting on the leaf, but would not have been drawing much nourishment.

"I am sending some plants and a large frond to Ray Best, directly to him.

"I concentrate on tropical, N.Q. ferns, and am not looking for southern species. They don't seem to like our wet and warm conditions, though I know some local species do grow right down to N.S.W. You are welcome to the little plantlets, they would only go to waste here. Let me know how you get on with them."

The C. prolifera plantlets were distributed among members who attended the April outing to Mount Tomah. We await with interest reports of the success which members had in their attempts to get the plantlets to grow on, hopefully to 9 ft.

It is apparent that Mrs. Bosworth's success growing ferns is not confined to C. prolifera. In another part of her letter she wrote:

"I wish that I could attend some of your field trips. It is amazing to me that North Queenslanders don't take much interest in ferns. I have quite a big collection, mainly N.Q. natives - some are difficult, others just take over. My Stenochlaena polustris has taken over my Hills clothes hoist, and unless it gets drastic treatment I won't have anywhere to hang my clothes. It is in full sun, and gets hundreds of fertile leaves. They are quite attractive when new, almost orange in colour, and come several times a year. Have not seen any sporelings, but the area is probably too open."

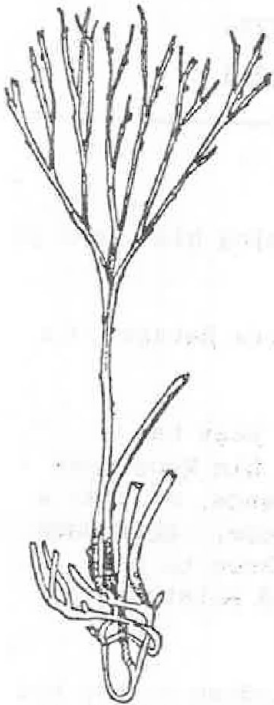
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Primitive and Unusual Fern Genera and Allies

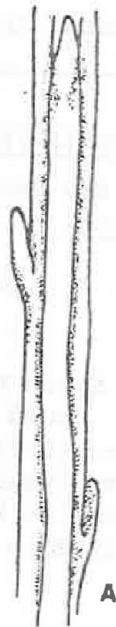
1. PSILOTACEAE

Examples: Psilotum nudum and P. complanatum (the only 2 species)

- * These ferns belong to one of the oldest living orders of plants
- * They are easily recognised by their wiry skeleton-like stems which are repeatedly forked into coral-like tufts.
- * The leaves are scale-like
- * They have lobed spore cases (synangia) which are two or three fused sporangia, attached directly to the stems.
- * They are epiphytic, ^{or} terrestrial and partially saprophytic (Using non-organic matter as food.)
- * They have no true roots: they absorb water and nutrients through hairs (rhizoids) attached directly to the rhizome.



Psilotum nudum



Portion of stem

[1 mm



Synangia

[1 mm

2. TMESIPTERIDACEAE

Examples: Tmesipteris ovata and T. truncata

- * This is also a primitive family of fern allies.
- * They differ from Psilotum in that;
 - a) the stems are always pendulous
 - b) the leaves are obvious and not scale-like.
 - c) the stems are unbranched and not forked like Psilotum.
 - d) the synangia are formed of only 2 sporangia.
 - e) they are always epiphytic on tree fern trunks.

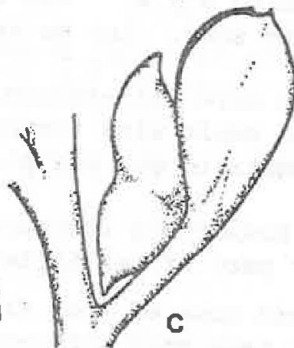


Tmesipteris ovata

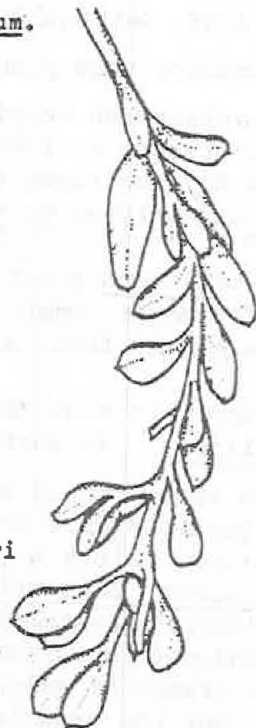
sporophyll and synangia



1 mm]



T. billardieri
synangia



Our sincere thanks to Joan Moore of Gladesville, Sydney for sharing her experiences growing ferns, in the following articles:

Handsome Ferns That I Find Easy To Grow In The Ground

I have had Polystichum australiense in the ground for over twenty years - it was one of my first ferns and I bought it at a local street stall for a shilling. The original base is still there, with the present growth about 20cm from where it began. This plant has produced innumerable plants from the plantlets that come on the ends of the fronds, both fertile and infertile. If these plantlets are not already rooted when I want some to dig up I pin the frond down with a rock or a stick. They root much quicker this way than if they are taken off and put in pots, and it is much less trouble. I cut off a piece of the original frond with the new plant and pot it for giving away. Although this fern looks tough because it has harsh fronds I have found that it cannot grow in too sunny a spot, it needs at least a position under trees, and it needs watering at least once a week. The larger the plant however the better it can stand dryness. The very similar Polystichum proliferum I acquired only about three years ago from a fellow member of the local S.G.A.P. Group. This one is not yet as large as the P. australiense plants, whose fronds are a metre or more long. It is not as harsh to the touch, the tips of the ultimate segments are not as sharply pointed, its pinnae grow rather more closely together and it is a softer green. It is growing in the same conditions as P. australiense, and has two plantlets coming on. I have tried P. australiense several times as a pot plant, but it does not look good once it gets bigger. Some ferns, e.g. Asplenium bulbiferum, can grow large and fine in containers, but not P. australiense - at least not for me. In the ground all the attention it gets is watering, and occasional cutting off of dead fronds. It has never had any pests or diseases.

Other ferns that grow easily for me in the ground are some Lastreopsis species. These are running ferns, but the only one so far that has run with any speed is Lastreopsis microscora. As this, like the others, has quite a handsome frond, shiny and broad, about 80cm. long, I have had no difficulty in giving away any surplus. It does not root too deeply and so has not been difficult to dig up. It is in deeper shade under trees than the polystichums. Smaller, and not so fast-moving is Lastreopsis munita, whose fronds, to about 50cm., have a sort of fringe on them. This is at present in full shade and protection under saron. Soon I am going to try a piece outside the shadehouse. So far, over seven years, it has had no pests or diseases. It made a nice potplant for two or three years, but then got too crowded and discouraged so I put it in the ground. Lastreopsis acuminata, formerly shepherdi, for me does not have very tall fronds (about 50cm.) nor has it spread fast since I put it in the ground four and a half years ago in full shade. I have another clump outside getting some sun which looks rather tatty at the moment, but this may be the fault of the tiny snails that I have just been picking off it. Lastreopsis hispida I have had in the ground for two years. It was a lovely little fern when I bought it, reddish and woolly. While still in the pot it got infested with scale, which I cleaned off. In the ground it is healthy, but still small. The texts say this is a long-running fern: if so it is also slow. I do not expect to have to dig any out. It is in complete shade under trees. The shiniest of the Lastreopsis is L. marginans, which I put in the deepest shade I had outside the shadehouse. Two years later it is a little larger but has too many small fronds. I think it should look better. It is watered with the garden about every second day. Maybe it needs more protection from the wind, also the shade is not so dense now as it was.

The handsomest of all these Aspidiaceae ferns that I have is Arachniodes aristata, obtained thanks to Phyl Brown and the plant sales at the Show of 1984. I had never seen it before, for sale, in anyone's garden, or anywhere, so I was delighted to get it. It is growing very well in light shade under trees, getting no direct sun. Its fronds at present are up to 90cm. long, a rich, dark, shiny green.

None of these ferns seem to mind that my soil is fairly heavy, with lots of clay in it, though I have been digging in compost for years, and there is always plenty of mulch about. Water and shade seem to be their main requirements. They do not get specially fertilised: I may scatter a little blood and bone occasionally, mainly for the benefit of the angiosperms that provide the shade.

Situation Ordinary suburban garden at Gladesville, Sydney, about 15 miles from the coast, between the Lane Cove and Parramatta Rivers. Very rarely any frosts.

Joan Moore

Success with Blechnums?

Blechnums I have never felt very confident about. I have lost numerous plants, even of those I now have established. My successful blechnums so far are B. nudum, B. cartilagineum and B. minus. My first nudum I brought home from the South Coast before 1968, and planted it in a spot not particularly shady at the time. It grew well for ten years building up a small trunk, then lost its fronds and stopped growing, due probably to lack of water. To try to keep it going I moved it. It got a few new shoots which snails promptly ate, and although it kept trying for another year the drought finally got it. These were the years of the long hot dry summers, but I should have given it more attention. My next nudum came attached to a small tree fern a friend gave me. There was also a piece of Culcita dubia. The tree fern soon died - why I don't know - but the attachments survived. The B. nudum is now, seven years later, quite a good fern, but not very big. It is in complete shade under vines and a tree fern, with plenty of mulch and I am careful to water it regularly, in view of my other failures. There were two others in the ground when I got this one: both soon died. A small one arrived by mail when I had ordered B. orientale. It died within a month, still in its nursery pot. One received as a present I put in the ground under the sarlon, but it died in a year. The next present I put in the ground immediately, outside near the tree fern one. Now, two years later, it is almost as big, and I think it may be established. Both of these are growing in a thin layer of broken down compost over heavy loam. I would not put B. nudum in the shadehouse again, I think it did not get enough light and air in the ground there.

The first B. cartilagineum I also had for about ten years, growing at the foot of a tea tree. It died of drought too. I had thought it was well watered because the surface mulch was damp. When eventually I dug a little I found the soil underneath bone dry. This was also during the dry summers, and my hand watering was obviously insufficient. Now I investigate under the mulch if a fern is not progressing. To replace the lost one I bought a very fine plant at a native nursery and planted it under the sarlon where it grew beautifully till the middle of last winter i.e. six years, when all the fronds died! There was still some green rhizome, so left it alone. In the late spring it sent out some new fronds, and now looks quite well, but much smaller than it was before. This one has never been dry. A third specimen of this fern I acquired a couple of years later. There was a poor dilapidated clump of dead frond bases on the roadside in an area rapidly being built up. There were still signs of growth, enough to show it was B. cartilagineum, so with a screwdriver I levered a piece out, took it home in a plastic bag (I always carry them) having moistened it in some water lying conveniently in a hollow nearby, and planted it in mostly sphagnum moss. I kept it under plastic like a cutting for some time and eventually shoots appeared. I then potted it on and put it under the sarlon. Eighteen months later I put it in the ground under a tree fern, where it is growing well in quite bright light. I think I was lucky with this one!

My third successful blechnum is B. minus, but it took time. I lost two purchased plants at first, each of which lasted about a year without growing. A friend gave me pieces on two occasions and both times I could not strike them. She gave me some more, and this time they grew, so well in fact that now, six and a half years later, I have had to remove some from its place in the ground under the sarlon. Another one of these is growing in the garden, but sheltered, and has been since I bought it in 1980, very small, because it was labelled B. orientale! This, though almost smothered, keeps going with no trouble at all. (As for B. orientale, I did once manage to buy one that really was what it said it was, but it didn't last long.)

I do have some other blechnum species growing well at the moment, but as they are all only two or three years old I shall not claim success yet. If they are still there at the end of five years it will be time to rejoice.

Joan Moore.

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DEADLINE FOR CONTRIBUTIONS

We are always pleased to receive items for inclusion in our Newsletter. For our September 1988 issue contributions are required by no later than 15th August 1988.

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FERNS FOR RESALE

Our Group plans to sell ferns at the Wildflower Exhibition which is being held from 16 September 1988 in Bankstown. We hope to be able to offer attractive species including some of the North Queensland ferns that have proven to be reasonably reliable in Sydney.

If you are interested in supplying ferns for sale please contact our Secretary (Moreen can be phoned on (02) 528 4881) with details of species, numbers, size and prices. Early advice would be appreciated.

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WHEN IN WAGGA WAGGA

Mr. and Mrs. Mick Powell of 250 Bourke Street, Wagga Wagga have a garden of ferns, many brought back from different trips from Cairns to Victoria. Not an easy task, lots of watering required to maintain these ferns in the Riverina.

The Powells have written to say that they would love to have any members going through Wagga Wagga pop in to enjoy their ferns. Local charity groups often take visitors to the Powell's garden as part of their fund raising activities.

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A SELECTION OF ITEMS FROM NEWSLETTERS

Extracts from past Newsletters have been printed in two small volumes and may be of interest to newer members. Volume 1 contains items from Numbers 2 to 20 and was published in July 1984, while Volume 2 contains items from Numbers 21 to 31 and was published September 1986. Copies are obtainable from the Secretary at a cost of \$2 for Volume 1 and \$3 for Volume 2, post free.

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RED CARPET

A warm welcome is extended to the following new members:

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REPORT ON WORKING BEE AT JOSEPH BANKS PLANT RESERVE

There were 17 members present to help remove a number of exotic ferns from an area in the Reserve below a wall of sandstone. Apart from the exotic ferns, other weeds and a good deal of Histiopteris incisa were removed. Some self sown small Todea barbara and two Asplenium australasicum were moved to more suitable locations in the Reserve.

In the area cleared plantings were made of Cyathea woollsiana, C. cunninghamii, Pteris umbrosa, Lastreopsis microsora, Blechnum minus and two ferns described as Blechnum minus X wattsi.

Cost of the ferns planted has been paid by Sutherland Shire Council. The Reserve which is situated in Manooka Place, Kareela, is presently in excellent condition and well worth a visit. The facilities are good, paths well constructed and almost all of the very extensive range of native plants have been clearly labelled.

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Contd. from P. 7 - SOUTH EAST QUEENSLAND REPORT - PROGRAMME

Sunday 22 May 1988 - 9.30am Fern identification venue: Alan & Lorna Murray's, 18 Pantheon St. Jindalee.

Sunday 10 July 1988 - 9.30am Lastreopsis Key venue: Russell and Irene Cullins, 39 Summingdale Av Rochedale. Then visit Rod Pattison's fernery, Miles Platting Rd, Rochedale

REPORT ON MEETING 29 March 1988

The home of Tess and Les Taylor at Blacktown was the day's venue. The garden is notable for a fine collection of well grown native plants, a testimony to the Taylors' long association with S.G.A.P. and shows the diversity of their interests. Les was a long time leader of the Prostanthera Study Group so a fine collection of this genus was expected but there are many other notable trees and shrubs and an outstanding collection of orchids.

However the ferns are most prominent beginning in the front garden with Adiantum aethiopicum providing ground cover beneath trees and shrubs. The following are a few of the ferns in an area under shade cloth watered by a misting system: Ampelopteris proliferata in a hanging basket and with 2 m. long pendulous fronds with proliferous buds, several Davallia pyxidata with vigorous rhizomes reaching more than 50 cm. from shallow hanging baskets, in some cases the baskets almost completely covered while in others the rhizomes spread less and the fronds were quite upright, Lycopodium phlegmaria, L. proliferum with the tip of one frond in a small pot attached to the side of its basket and forming into a new plant, Ophioglossum pendulum definitely a not easy to grow fern oddity but this one appeared healthy with strap-like fleshy fronds, Oleandra neriiiformis, Drynaria rigidula mature plants in excellent condition and a variety of this fern with wider pinnae and deeply and irregularly lobed margins known as D. rigidula "Whitei" and an outstanding Platycterium superbum.

It wasn't possible to penetrate the last one third of the shaded area which was packed with large ferns including Diplazium australe and Nephrolepis hirsuta - Les referred to this area as his jungle.

The hot house at the rear of the garden was filled with many ferns and other plants. Les appears to delight in defying convention. There were many orchids growing in "invisible" pots. When questioned about his secret for growing such fine healthy orchids, Les pointed to a 44 gallon drum with the top removed half filled with liquid cow manure into which Les said he periodically dips his orchids. Notable ferns here included Davallia denticulata apparently thriving in a pot which was sitting in a tray covered with 2 cm of water, Adiantum silvaticum and Microsorium punctatum, Platycterium hillii and P. veitchii mounted on boards. Two clumps of Psilotum nudum and P. complanatum helped explain Les' "invisible" pots - it was apparent that the sides of the plastic pots had been cut away to allow more growth from the bottoms of the pots.

At the conclusion of the business part of the meeting and after lunch, our Leader talked and showed slides taken in New Zealand during Peter's trip to the South Island collecting during March and April 1987. Although the trip was described by Peter "blessed with rain", many of the slides were memorable. Everyone enjoyed seeing the beauty and abundance of the ferns and was able to at least recognise ferns of the same genera as our own.

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OUTING TO MOUNT TOMAH 13 April 1988

On a perfect Autumn day a total of 40 persons including members, family and visitors spent up until lunch time inspecting the recently opened Botanic Gardens. Our Leader Peter conducted us on a most informative walk through mainly cool climate plants set out in attractively landscaped grounds with glorious views across the mountain tops. Ferns that were noticed growing naturally there or planted included Cyathea australis, Dicksonia antarctica, Todea barbara, Polystichum australiense, Blechnum nudum, Asplenium flabellifolium and Pyrrhosia rupestris.

After lunch most of the party followed Peter to a nearby ferny gully. After climbing over the gate and tucking trouser legs into socks - someone had mentioned leeches, we passed Blechnum cartigaginium, Pellaea falcata, Polystichum australiense, Doodea aspera and of course the almost always present bracken, Pteridium esculentum.

Descending deeper in the gully we entered a closed canopy area where ferns abounded. Microsorium scandens competed with Arthropteris tenella for places on tree trunks and over rocks sometimes covering filmy ferns which included

Hymenophyllum cupressiforme. Pyrrosia rupestris covered the trunks of trees while Asplenium australasicum, orchids and other epiphytes were also apparent overhead. On the ground Blechnum patersonii and Lastreopsis microsora were most prominent. Tree ferns lined the creek and in one spot a patch of Allantodea australis with tufted rhizome and large pale green fronds. Further along quite a slippery track we passed Asplenium bulbiferum and Dennstaedtia davallioides, its lacy fronds showing evidence of caterpillar attack.

Emerging from the rainforest and climbing the hillside we saw Sticherus tener with pinnule margins entire unlike the more common S. flabellatus, Lindsaea microphylla, Gulichenia dicarpa and Culcita dubia. After climbing over another gate we reached the road and retraced our steps to our cars having sighted 25 species of ferns on our short walk.

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FORTHCOMING EVENTS - SYDNEY REGION

Sunday 19 June 1988: OUTING GOSPERS CREEK

Meet at 9.30am for 10 o'clock sharp start from Mountain Lagoon. Directions from Sydney, turn right just as you reach Bilpin on the Bells Line of Road and proceed along Mountain Lagoon Road which is sealed most of the way. Moderately easy walk to Gospers Creek but some scrambling down creek so strong shoes advisable. Carry lunch in back pack. Any enquiries for directions phone Peter 625 8705. If weather doubtful check with Peter before 8am.

Saturday 23 July 1988: MEETING AT THORNLEIGH

Meet from 12 noon, business/study session commences at 1pm sharp. As a follow-on from our May study day there will be more about Adiantums.

Venue is the home of Beryl Geekie at 12 Nelson Street, Thornleigh. Any problem with directions phone Beryl on 484 2684.

The Geekies have a fern nursery and members will be able to inspect ferns and if desired make purchases.

Sunday 21 August 1988: OUTING PEATS RIDGE

Meet at 10am at the home of Elaine Slade, Kawana, RMB 1461. If coming from Sydney leave Expressway at turn off to Peats Ridge, it is on the left; travel about 10km look for Barokee Rd on right - but don't enter it, take first turn to right after Barokee Rd. If you miss the turn or reach the Oak Milk Bar you have gone too far. Turn around, Kawana is about 4km south of Oak Milk Bar on the left. After inspecting the Nursery, (if desired members may purchase ferns) and morning tea, water will be provided, it is intended to drive to Somersby Falls for lunch and walk, and inspection of ferns in that area. Any problems with directions phone Elaine (043) 731 186.

Friday, Saturday, Sunday 16 to 18 September 1988: WILDFLOWER EXHIBITION

This annual event undoubtedly the highlight of S.G.A.P. activities in New South Wales, this year is to be held at the Basketball Stadium, Condell Park near Bankstown Aerodrome.

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SOUTH EAST QUEENSLAND REPORT

(for PROGRAMME
see end Page 5)

Our group got off to a slow start this year. Firstly there was yet another summer of well below average rain fall. Then April brought us record breaking rain. This made us cancel our excursions to Mt. Glorious. Nineteen members and friends met at Ray and Gwen Norris's home for our study of Doryopteris paraceterach Pellaea and Pleurosorus. Ray's ferns were looking marvellous. He showed us his potting mix which was well composted leaf mulch 70 parts to 30 parts white bedding (river) sand. The leaf compost was a load of shredded green leaf and branches from shrubs - a mixture of various varieties. This had to be turned frequently while fresh because of the heat build up. Then let to settle for some months. The dry top mulch was discarded before making up the potting mixture. Once the ferns are potted he adds "NutriCote" to each pot.

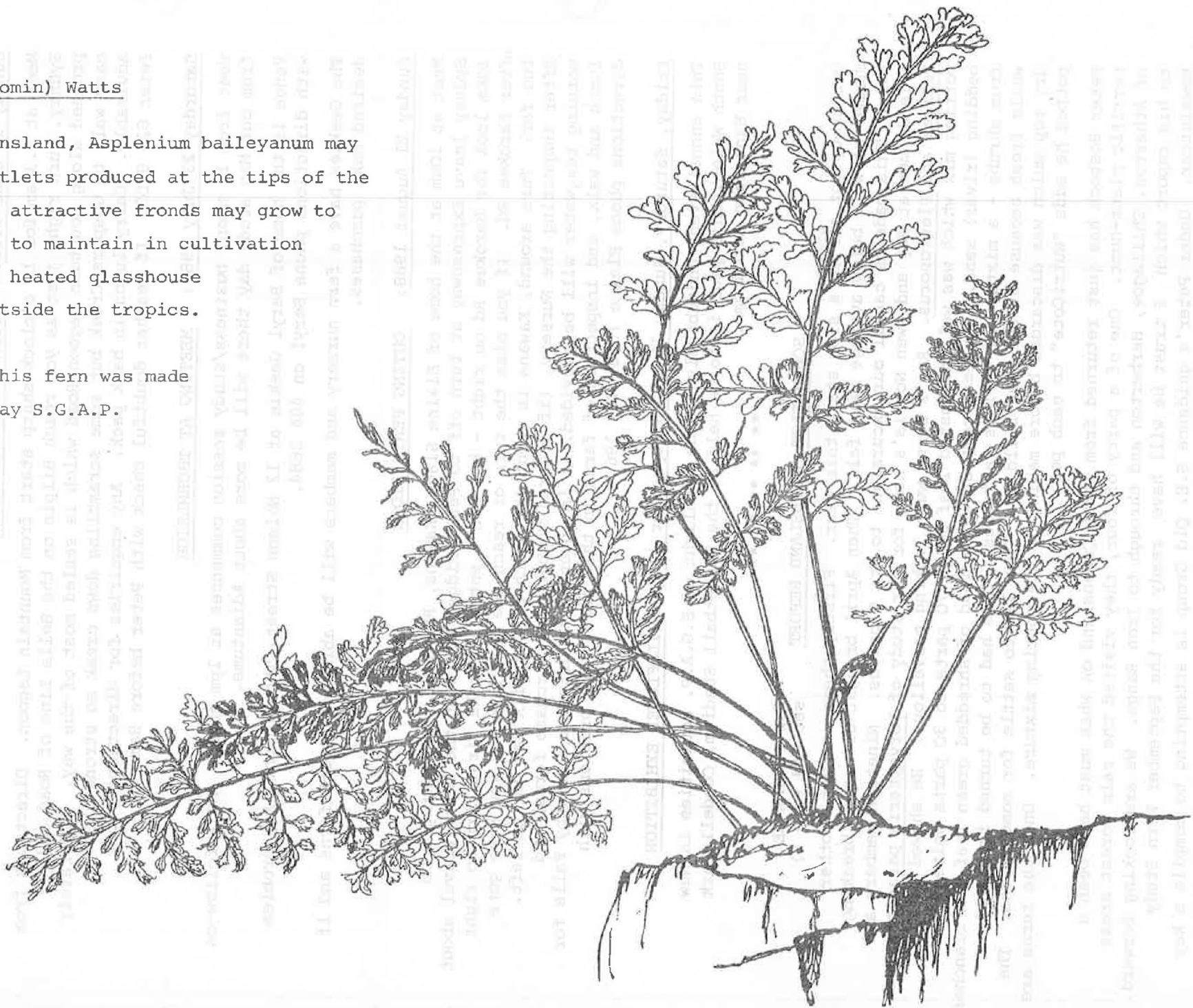
Peter Bostock has just returned from North Queensland on what must have been a terrific plant-hunt. One of a party of four, they visited the rain forest areas of Atherton, Chillagoe, Herberton and through to Iron Range. We are looking forward to his report which I trust he will have ready for the September Fern Study Newsletter. Under Peter's guidance S.E. Qld Group is attempting to compile a key to Lastreopsis, starting July meeting. He is also arranging excursion, probably to East Cedar Crk in the Mapleton State Forest, towards end August.

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Asplenium baileyana (Domin) Watts

From North-eastern Queensland, *Asplenium baileyana* may be propagated from plantlets produced at the tips of the frond or by spore. The attractive fronds may grow to 30 cm. but is difficult to maintain in cultivation and probably requires a heated glasshouse situation when grown outside the tropics.

The superb drawing of this fern was made by Helga Alcock of Mackay S.G.A.P.



Helga