

**THE DISTRIBUTION OF LICHENS IN
WESTERN AUSTRALIA**

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ABSTRACT

Distribution maps based on a 1° lat. x 1.5° long. grid system are given for 192 species of Western Australian lichens.

INTRODUCTION

Lichens have been shown to be very sensitive to low level toxic gas pollution as well as other environmental disturbances. In Britain, they have been extensively mapped and with good collections over the years, mappers have been able to demonstrate the decline of certain lichen species and morphological types with the increase in urbanisation and the spread of industrialisation.

As a widespread element in the cryptogamic flora, lichens occur in varying habitats and climatic regimes. Although abundant, they have until recently been poorly collected, and current distribution maps for many species reveal a lack of collecting effort rather than confined or restricted distribution. The microlichens, small inconspicuous species occurring on tree bark and on rocks, are not well represented in many herbaria collections. It is interesting to note that highly coloured or conspicuous macrolichens are rather well collected by non-lichenologists thus providing better distribution data. The taxonomy of many species remains uncertain pending taxonomic revisions.

The purpose of this paper is to publish the current knowledge and distribution of this neglected group of cryptogams. These maps will serve as the baseline for biogeographic studies, although they could also be useful for ecological and taxonomic studies.

Maps showing species distribution have been arranged alphabetically according to species names and the authority for each species is given. The system of indicating the distribution follows that of Hnatiuk and Maslin (1980) for the genus *Acacia* in Western Australia. Type specimens, where present, are indicated with an (*) and the grid cell enhanced. However, where the precise locality is not known, no enhancement is made. The 192 lichen species occurring in 88 grid cells are listed in Table 1.

The distributional data were originally collated from the author's collections (1967 to present). Part of this collection is now housed in the Western Australian Herbarium (PERTH). For more comprehensive and historical distribution data, herbarium specimens housed in various other institutions were also examined. All locality data collated have been compiled by the author into a separate work entitled "Distribution Information for Western Australian Lichens". Copies of this work have been lodged with the Western Australian Herbarium (PERTH) and with the Bureau of Flora and Fauna, Canberra.

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REFERENCE

- Hnatiuk, R.J. and Maslin, B.R. (1980). The distribution of *Acacia* (Leguminosae-Mimosoideae) in Western Australia. Part 1. Individual species distribution. *W. Austral. Herb. Res. Notes* 4: 1-103.

Table 1. List of lichen species occurring in 1° x 1.5° grid cells

Cell 104	1 species
<i>Rocella</i> sp.	
Cell 105	6 species
<i>Buellia punctata</i>	<i>Diploschistes scruposus</i>
<i>Buellia retrovertens</i>	<i>Dirinaria aegialita</i>
<i>Caloplaca fulgens</i>	<i>Graphis afzelii</i>
Cell 108	12 species
<i>Arthrothelium interveniens</i>	<i>Microthelia micula</i>
<i>Caloplaca fulgens</i>	<i>Parmelia dilatata</i>
<i>Candelariella vitellina</i>	<i>Parmelia praesorediosa</i>
<i>Chaenotheca melanophaea</i>	<i>Parmelia tinctorum</i>
<i>Lecidea contigua</i>	<i>Pysine coccifera</i>
<i>Lepraria candelaris</i>	<i>Ramalina celastri</i>

Cell 109	2 species <i>Bacidia microphyllina</i>	<i>Lepraria membranaceae</i>
Cell 110	1 species <i>Acarospora schleicheri</i>	
Cell 112	1 species <i>Ramalina celastri</i>	
Cell 113	1 species <i>Pyxine petricola</i>	
Cell 116	6 species <i>Acarospora schleicheri</i> <i>Arthropyrenia</i> var. <i>fallax</i> <i>Caloplaca fulgens</i>	<i>Catillaria</i> sp. <i>Dirinaria appplanata</i> <i>Pyxine petricola</i>
Cell 120	2 species <i>Acarospora schleicheri</i>	<i>Caloplaca fulgens</i>
Cell 129	4 species <i>Acarospora novaehollandiae</i> <i>Acarospora schleicheri</i>	<i>Acarospora sinopica</i> <i>Lecidea crystallifera</i>
Cell 134	5 species <i>Acarospora schleicheri</i> <i>Anema</i> sp. <i>Buellia disciformis</i>	<i>Caloplaca fulgens</i> <i>Peccania</i> sp.
Cell 141	1 species <i>Acarospora schleicheri</i>	
Cell 144	2 species <i>Acarospora schleicheri</i>	<i>Anema</i> sp.
Cell 145	1 species <i>Anema</i> sp.	
Cell 146	1 species <i>Lichenothelia scopularia</i>	
Cell 156	1 species <i>Diploschistes scruposus</i>	
Cell 165	2 species <i>Lecidea decipiens</i>	<i>Xanthoria ectanea</i>
Cell 169	1 species <i>Acarospora schleicheri</i>	
Cell 176	6 species <i>Buellia subalbula</i> <i>Lecanora sphaerospora</i> <i>Lecidea decipiens</i>	<i>Pyxine petricola</i> <i>Ramalina celastri</i> <i>Xanthoria ectanea</i>
Cell 177	2 species <i>Acarospora schleicheri</i>	<i>Parmelia plittii</i>

Cell 178	2 species
<i>Acarospora schleicheri</i>	<i>Lecidea decipiens</i>
Cell 187	1 species
* <i>Lecidea ochroleuca</i>	
Cell 190	2 species
<i>Lecidea crystallifera</i>	<i>Lecidea decipiens</i>
Cell 196	1 species
<i>Parmelia refringens</i>	
Cell 197	2 species
<i>Heppia euploca</i>	<i>Peltula euploca</i>
Cell 201	2 species
<i>Lecidea decipiens</i>	<i>Usnea scabrada</i>
Cell 202	1 species
<i>Diploschistes subocellatus</i>	
Cell 204	1 species
<i>Acarospora schleicheri</i>	
Cell 205	1 species
<i>Peltula euploca</i>	
Cell 206	2 species
<i>Lecidea decipiens</i>	<i>Synalissa</i> sp.
Cell 210	1 species
<i>Parmelia scabrosa</i>	
Cell 213	6 species
<i>Acarospora schleicheri</i>	<i>Parmelia subalbicans</i>
<i>Parmelia callifolia</i>	<i>Teloschistes chrysophthalmus</i>
<i>Parmelia incantata</i>	<i>Xanthoria ectanea</i>
Cell 215	3 species
<i>Diploschistes scruposus</i>	<i>Heterodea muelleri</i>
<i>Diploschistes subocellatus</i>	
Cell 216	2 species
<i>Acarospora schleicheri</i>	<i>Caloplaca aurantiaca</i>
Cell 217	4 species
<i>Acarospora schleicheri</i>	<i>Parmelia plittii</i>
<i>Buellia subalbula</i>	<i>Synalissa</i> sp.
Cell 219	1 species
<i>Parmelia pulla</i>	
Cell 224	20 species
<i>Acarospora schleicheri</i>	<i>Heterodea muelleri</i>
<i>Candelariella vitellina</i>	<i>Lecidea contigua</i>
<i>Cladia corallaizon</i>	<i>Lecidea decipiens</i>
<i>Diploschistes scruposus</i>	<i>Ochrolechia subpallenscens</i>
<i>Haematomma eremaeum</i>	<i>Parmelia rutidota</i>

Cell 224 (cont.)	
<i>Parmelia subalbicans</i>	<i>Siphula coriacea</i>
<i>Pertusaria leioplaca</i>	<i>Teloschistes chrysophthalmus</i>
<i>Physcia stellaris</i>	<i>Usnea scarbida</i>
<i>Pyrine cocoes</i>	<i>Xanthoria ectanea</i>
<i>Ramalina inflata</i>	<i>Xanthoria parietina</i>
Cell 225	5 species
<i>Cladia corallaizon</i>	<i>Teloschistes chrysophthalmus</i>
<i>Parmelia conspersa</i>	<i>Usnea scabrida</i>
<i>Physcia stellaris</i>	
Cell 226	3 species
<i>Parmelia conspersa</i>	<i>Siphula coriacea</i>
<i>Parmelia verrucella</i>	
Cell 229	1 species
<i>Acarospora schleicheri</i>	
Cell 231	4 species
<i>Acarospora schleicheri</i>	<i>Fulgensia bracteata</i>
<i>Dermatocarpon compactum</i>	<i>Lecidea decipiens</i>
Cell 234	6 species
<i>Parmelia rutidota</i>	<i>Physcia stellaris</i>
<i>Parmelia subalbicans</i>	<i>Teloschistes chrysophthalmus</i>
<i>Pertusaria leioplaca</i>	<i>Usnea scabrida</i>
Cell 235	4 species
<i>Ramalina inflata</i>	<i>Teloschistes chrysophthalmus</i>
<i>Siphula coriacea</i>	<i>Usnea scabrida</i>
Cell 236	5 species
<i>Diploschistes scruposus</i>	<i>Parmelia terrestris</i>
<i>Parmelia callifolia</i>	* <i>Parmelia tokajensis</i>
<i>Parmelia scabrosa</i>	
Cell 237	10 species
<i>Buellia disciformis</i>	<i>Parmelia callifolia</i>
<i>Diploschistes subocellatus</i>	<i>Parmelia conspersa</i>
<i>Haematoma eremaeum</i>	<i>Siphula coriacea</i>
* <i>Haematomma pruinatum</i>	<i>Xanthoria ectanea</i>
<i>Lecidea contigua</i>	<i>Xanthoria parietina</i>
Cell 238	4 species
<i>Acarospora schleicheri</i>	<i>Parmelia callifolia</i>
<i>Aspicilia calcarea</i>	<i>Parmelia rutidota</i>
Cell 240	1 species
<i>Parmelia pulla</i>	
Cell 245	19 species
<i>Blastenia</i> sp.	<i>Parmelia callifolia</i>
<i>Buellia punctata</i>	<i>Parmelia ferax</i>
<i>Caloplaca aurantiaca</i>	<i>Parmelia nebulosa</i>
<i>Haematomma eremaeum</i>	<i>Parmelia pruinata</i>
<i>Heterodea muelleri</i>	<i>Parmelia reptans</i>
<i>Ochrolechia subpallenscens</i>	<i>Parmelia rutidota</i>

- Cell 245 (cont.)
Parmelia subalbicans
Parmelia tinctoria
Parmelia willisii
Pertusaria leioplaca
Teloschistes chrysophthalmus
Usnea barbata
Usnea scabrada
- Cell 246
Cladia corallaizon
Diploschistes scruposus
Diploschistes subocellatus
Heterodea muelleri
8 species
Lecidea decipiens
Parmelia convoluta
Siphula coriacea
Xanthoria ectanea
- Cell 247
Blastenia sp.
Parmelia rutidota
4 species
Physcia stellaris
Siphula coriacea
- Cell 248
Acarospora schleicheri
Aspicilia calcarea
**Buellia glomerulans*
Buellia subalbula
**Buellia subcoronata*
Chondropsis semiviridis
Dermatocarpon lachneum
Diploschistes subocellatus
Diploschistes scruposus
Heterodea beaugleholei
Heterodea muelleri
Lecidea decipiens
24 species
Parmelia callifolia
Parmelia cheelii
Parmelia metaclystoides
Parmelia plittii
Parmelia pulla
Parmelia reptans
Parmelia terrestris
Parmelia tinctoria
Parmelia verrucella
Peltula euploca
Siphula coriacea
Synalissa sp.
- Cell 249
Parmelia rutidota
1 species
- Cell 251
Aspicilia calcarea
Lecanora sphaerospora
Lecidea decipiens
5 species
Peltula omphaliza
Peltula placodizans
- Cell 253
Aspicilia calcarea
Buellia subalbula
Caloplaca aurantiaca
Chondropsis semiviridis
Collema coccophorum
Diploschistes subocellatus
Lecanora sphaerospora
13 species
Lecidea crystallifera
Lecidea decipiens
Lecidea planata
Ochrolechia subpallenscens
Teloschistes chrysophthalmus
Xanthoria parietina
- Cell 255
Aspicilia calcarea
Buellia disciformis
Buellia subalbula
Calicium sp.
Caloplaca aurantiaca
Caloplaca fulgens
Candelariella vitellina
Cladia aggregata
Cladia corallaizon
Cladonia cariosa
41 species
Cladonia calycantha
Cladonia verticillata
Coccocarpia erythroxili
Dermatocarpon hepaticum
Diploschistes subocellatus
Diploschistes scruposus
Ephebe lanata
Fulgensia bracteata
Heterodea muelleri
Lecidea contigua

Cell 255 (cont.)

Lecidea planata
Leptogium ohyllocarpum
Parmelia conspersa
Parmelia incantata
Parmelia perlata
Parmelia rutidota
Pertusaria leioplaca
Physcia caesia
Pseudocyphellaria australiensis
Pseudocyphellaria crocata
Ramalea cochleata

Ramalina calicaris
Ramalina inflata
Thysanothecium hookeri
Thysanothecium hyalinum
Toninia cumullata
**Usnea angulosa*
Usnea scabrida
Verrucaria maura
Xanthoria ectanea
Xanthoria parietina

Cell 256

Chondropsis semiviridis
Cladia aggregata
Cladia corallazon
Diploschistes scruposus
Fulgensia bracteata
Heterodea muelleri
Lecidea contigua
Heterodea beaugleholei

15 species

Lecidea crystallifera
Parmelia australiensis
Parmelia conspersa
Parmelia pulla
Siphula coriacea
Teloschistes chrysophthalmus
Thysanothecium hyalinum

Cell 257

Chondropsis semiviridis
Diploschistes scruposus
Diploschistes subocellatus
Heterodea beaugleholei
Heterodea muelleri
Lecidea crystallifera
Lecidea decipiens

14 species

Parmelia incrustata
Parmelia pulla
Parmelia scabrosa
Ramalea cochleata
Siphula coriacea
Teloschistes chrysophthalmus
Xanthoria ectanea

Cell 258

Collema coccophorum
Diploschistes subocellatus
Heterodea beaugleholei
Heterodea muelleri

8 species

Lecidea contigua
Lecidea crystallifera
Parmelia rutidota
Siphula coriacea

Cell 259

Acarospora schleicheri
Aspicilia calcarea
Chondropsis semiviridis
Diploschistes scruposus
Diploschistes subocellatus
Heterodea beaugleholei
Heterodea muelleri
**Lecanora sphaerospora*
Lecidea contigua

17 species

Lecidea crystallifera
Lecidea decipiens
Parmelia callifolia
Parmelia incantata
Parmelia pruinata
Parmelia pulla
Parmelia reptans
Parmelia rutidota

Cell 260

Candelaria concolor

2 species

Heterodea beaugleholei

Cell 261

Buellia subalbula
Diploschistes scruposus
Heterodermia japonica

5 species

Lecidea decipiens
Teloschistes chrysophthalmus

Cell 262

Collema coccophorum
Parmelia callifolia
Parmelia convoluta

5 species

Parmelia willisii
Teloschistes chrysophthalmus

Cell 263

Aspicilia calcarea
Buellia subalbula
Chondropsis semiviridis
Diploschistes subocellatus
Fulgensia bracteata
Lecidea decipiens
Parmelia callifolia

14 species

Parmelia convoluta
Ramalina celastri
Ramalina evernioides
Ramalina lacerata
Teloschistes chrysophthalmus
Toninia caeruleonigricans
Xanthoria ectanea

Cell 264

Aspicilia calcarea
Buellia subalbula
Caloplaca aurantiaca
Chondropsis semiviridis
Cladia aggregata
Cladia ferdinandii
Cladonia amaurocraea
Cladonia calycantha
Cladonia chlorophaea
Cladonia coniocraea
Cladonia verticillata
Cladonia xanthoclada
Diploschistes scruposus
Ephebe lanata
Haematomma eremaeum
Heterodea beaugleholei
Heterodea muelleri
Lecidea laeta
Lecidea contigua
Lecidea decipiens
Lecidea planata

42 species

Menegazzia caesiopruinosa
Menegazzia platytrema
Pannoparmelia wilsonii
Parmelia australasica
Parmelia cheelii
Parmelia hypoprotocetrarica
Parmelia notata
Parmelia rutidota
Parmelia tinctoria
Ramalea cochleata
Siphula coriacea
Spilonema paradoxum
Teloschistes chrysophthalmus
Thysanothecium hookeri
Usnea arida
Usnea inermis
Usnea scabrata
Usnea torulosa
Verrucaria maura
Xanthoria ectanea
Xanthoria parietina

Cell 265

Buellia disciformis
Caloplaca aurantiaca
Caloplaca citrina
Caloplaca ferruginea
Caloplaca fulgens
Candelariella vitellina
Catillaria sp.
Cladia aggregata
Cladia corallaizon
Cladonia amaurocraea
Cladonia calycantha
Dermatocarpon lachneum
Diploschistes scruposus
Ephebe lanata
Haematomma eremaeum
Lecanora cancriformis
Lecidea decipiens

33 species

Leprocaulon microscopicum
Parmelia conspersa
Parmelia hypoprotocetrarica
Parmelia imitatrix
Parmelia pruvinata
Parmelia rutidota
Parmelia subalbicans
Physcia stellaris
Ramalea cochleata
Ramalina calicaris
Ramalina geniculata
Siphula coriacea
Teloschistes chrysophthalmus
Usnea consimilis
Usnea inermis
Usnea scabrata

- Cell 266
Acarospora novaehollandiae
Acarospora schleicheri
Caloplaca aurantiaca
Caloplaca ferruginea
Caloplaca fulgens
Candelariella spraguei
Candelariella vitellina
Chondropsis semiviridis
Cladia aggregata
Cladia corallaizon
Cladia ferdinandii
Caldonia xanthoclada
Collema coccophorum
Dermatocarpon lachneum
Diploschistes scruposus
Endocarpon helmsianum
Haematomma eremaeum
 33 species
Heterodea beaugleholei
Heterodea muelleri
Lecidea laeta
Lecidea croactata
Lecidea crystallifera
Lecidea decipiens
Ochrolechia subpallescens
Parmelia cheelii
Parmelia convoluta
Parmelia pulla
Parmelia rutidota
Ramalina inflata
Siphula coriacea
Teloschistes chrysoptthalmus
Thysanothecium hyalinum
Usnea scabrida
- Cell 268
Fulgensia bracteata
Heterodea beaugleholei
Lecidea decipiens
Lepraria membranaceae
**Lichina minutissima*
Parmelia cheelii
Parmelia conspersa
 14 species
Parmelia imitatrix
Parmelia quercina
Parmelia rutidota
Teloschistes chrysoptthalmus
Usnea scabrida
Usnea xanthopoga
Xanthoria ectanea
- Cell 269
Buellia subalbula
Chondropsis semiviridis
Diploschistes scruposus
Lecidea decipiens
 8 species
Parmelia callifolia
Parmelia imitatrix
Parmelia pumila
Usnea arida
- Cell 270
Chondropsis semiviridis
Collema coccophorum
 4 species
Fulgensia bracteata
Lecidea decipiens
- Cell 271
Parmelia rutidota
Ramalina celastri
 4 species
Ramalina inflata
Xanthoria ectanea
- Cell 273
Caloplaca aurantiaca
Cladia aggregata
Collema glaucopthalmum
Heterodermia obscurata
Leptogium phyllocarpum
Ochrolechia subpallescens
 11 species
Parmelia cooperi
Parmelia rutidota
Teloschistes chrysoptthalmus
Usnea scabrida
Xanthoria parietina
- Cell 274
Caloplaca citrina
Caloplaca cerina
Cladia aggregata
Cladia ferdinandii
Cladonia degenerans
Cladonia kremplhuberi
Cladonia verticillata
 26 species
Collema glaucopthalmum
Hypogymnia pulchrilobata
Hypogymnia suphysodes var.
austroerodioides
Hypogymnia subphysodes var.
subphysodes
Lecanora atra

Cell 274 (cont.)

Lepraria candelaris
Menegazzia platytrema
Pannoparmelia wilsonii
Parmelia conspersa
Parmelia mexicana
Parmelia perlata
Parmelia reticulata

Pseudocyphellaria australiensis
Ramalina celastri
Teloschistes chrysophthalmus
Thysanothecium hookeri
Thysanothecium hyalinum
Trapelia sp.
Xanthoria parietina

Cell 275

Caloplaca ferruginea
Chondropsis semiviridis
Cladonia amaurocraea
Diploschistes scruposus
 **Haematomma eremaeum*
Heterodea muelleri
Hypogymnia pulchrilobata
Lecidea decipiens
Lecidea planata
Parmelia callifolia

20 species

Parmelia conspersa
Parmelia ferax
Parmelia mexicana
Parmelia plittii
Parmelia rutidota
Parmelia willisii
Ramalina inflata
Siphula coriacea
Teloschistes chrysophthalmus
Usnea scabrida

Cell 276

Blastenia sp.
Buellia disciformis
Buellia punctata
Buellia stellulata
Caloplaca citrina
Chondropsis semiviridis
Cladia aggregata
Cladia ferdinandii
Cladonia verticillata
Collema coccophorum
Diploschistes scruposus
Fulgensia bracteata
Haematomma eremaeum
Heterodea muelleri
Lecidea decipiens
Parmelia callifolia
Parmelia cheelii

34 species

Parmelia mexicana
Parmelia pruinata
Parmelia pulla
Parmelia reptans
Parmelia rutidota
Parmelia terrestris
Parmelia verrucella
Ramalina celastri
Ramalina geniculata
Ramalina inflata
Siphula coriacea
Teloschistes chrysophthalmus
Toninia caeruleonigricans
Usnea scabrida
Usnea xanthopoga
Xanthoria ectanea
Xanthoria parietina

Cell 277

Buellia stellulata
Caloplaca fulgens
Catillaria sp.
Cladia aggregata
Cladia ferdinandii
Dermatocarpon lachneum
Heterodea muelleri

13 species

Lepraria membranaceae
Parmelia callifolia
Parmelia harrisii
Parmelia rutidota
Peltula euploea
Xanthoria ectanea

Cell 278

Aspicilia calcarea
Cladia aggregata
Cladia ferdinandii
Cladonia degenerans
Diploicia canescens
Diploschistes scruposus
Heterodea muelleri

14 species

Lecanora atra
Lepraria candelaris
Parmelia conspersa
Parmelia reticulata
Ramalina calicaris
Siphula coriacea
Xanthoria ectanea

Cell 279	3 species
<i>Diploschistes subocellatus</i>	<i>Teloschistes chrysophthalmus</i>
<i>Ramalina geniculata</i>	
Cell 280	6 species
<i>Buellia subdisciformis</i>	<i>Lecanora atra</i>
<i>Cladia aggregata</i>	<i>Usnea torulosa</i>
<i>Cladonia krempelhuberi</i>	<i>Xanthoria parietina</i>
Cell 281	32 species
<i>Aspicilia calcarea</i>	<i>Menegazzia platytrema</i>
<i>Buellia subalbula</i>	<i>Ochrolechia subpallescens</i>
<i>Caloplaca fulgens</i>	<i>Pannaria rubiginosa</i>
<i>Cladia aggregata</i>	<i>Pannoparmelia wilsonii</i>
<i>Cladia ferdinandii</i>	<i>Parmelia perlata</i>
<i>Cladonia calycantha</i>	<i>Parmelia reticulata</i>
<i>Cladonia chlorophaea</i>	<i>Parmelia rutidota</i>
<i>Cladonia verticillata</i>	<i>Parmelia tasmanica</i>
<i>Cladonia xanthoclada</i>	<i>Peltigera dolichorhiza</i>
<i>Coccocarpia erythroxili</i>	<i>Pseudocyphellaria australiensis</i>
<i>Collema glaucophthalmum</i>	<i>Pseudocyphellaria crocata</i>
<i>Dermatocarpon hepaticum</i>	<i>Ramalina celastri</i>
<i>Fulgensia bracteata</i>	<i>Siphula coriacea</i>
<i>Graphis scripta</i>	<i>Thelotrema lepadinum</i>
<i>Heterodermia obscurata</i>	<i>Thysanothecium hookeri</i>
<i>Lecidea decipiens</i>	<i>Usnea barbata</i>
Cell 282	65 species
<i>Arthonia</i> sp.	<i>Lepraria membranacea</i>
<i>Buellia stellulata</i>	<i>Menegazzia caesiopruinosa</i>
<i>Calicium</i> sp.	<i>Menegazzia platytrema</i>
<i>Caloplaca aurantiaca</i>	<i>Pannaria pityrea</i>
<i>Caloplaca ferruginea</i>	<i>Pannaria rubiginosa</i>
<i>Caloplaca fulgens</i>	<i>Pannoparmelia wilsonii</i>
<i>Catillaria</i> sp.	<i>Parmelia cheelii</i>
<i>Cladia aggregata</i>	<i>Parmelia erumpens</i>
<i>Cladia ferdinandii</i>	<i>Parmelia harrisii</i>
<i>Cladia schizopora</i>	<i>Parmelia imitatrix</i>
<i>Cladonia amaurocraea</i>	<i>Parmelia perlata</i>
<i>Cladonia calycantha</i>	<i>Parmelia pruinata</i>
<i>Cladonia cariosa</i>	<i>Parmelia pulla</i>
<i>Cladonia chorophaea</i>	<i>Parmelia rutidota</i>
<i>Cladonia furcata</i>	<i>Parmelia subalbicans</i>
<i>Cladonia pityrea</i>	<i>Peltigera dolichorhiza</i>
<i>Cladonia polydactyla</i>	<i>Peltigera spuria</i> var. <i>erumpens</i>
<i>Cladonia pyridata</i>	<i>Pertusaria leioplaca</i>
* <i>Cladonia xanthoclada</i>	<i>Physcia endococcinea</i>
<i>Coccocarpia erythroxili</i>	<i>Physcia stellaris</i>
<i>Collema glaucophthalmum</i>	<i>Placopsis</i> sp.
<i>Dermatocarpon lachneum</i>	* <i>Porocyphus lichenelloides</i>
<i>Ephebe lanata</i>	<i>Pseudocyphellaria australiensis</i>
<i>Haematomma eremaeum</i>	<i>Pseudocyphellaria crocata</i>
<i>Heterodermia obscurata</i>	<i>Ramalea cochleata</i>
<i>Hypogymnia subphysodes</i> var. <i>austrerioides</i>	<i>Ramalina inflata</i>
<i>Hypogymnia subphysodes</i> var. <i>subphysodes</i>	<i>Rhizocarpon geographicum</i>
<i>Lecanora atra</i>	<i>Sarcogyne clavus</i>
	<i>Stereocaulon corticatum</i>
	<i>Teloschistes chrysophthalmus</i>

Cell 282 (cont.)

Thysanothecium hookeri
Thysanothecium hyalinum
Umbilicaria polyphylla
Usnea torulosa

Usnea scabrida
Usnea xanthopoga
Xanthoria parietina

Cell 283

Caloplaca fulgens
Cladia ferdinandii
Heterodermia obscurata
Lecidea laeta
 **Parmelia antleriformis*
Parmelia rutidota
Parmelia tinctoria

14 species
Ramalina calicaris
Ramalina geniculata
Teloschistes chrysophthalmus
Thysanothecium hyalinum
Usnea inermis
Xanthoria ectanea
Xanthoria parietina

Cell 284

**Cladia ferdinandii*
Teloschistes chrysophthalmus

4 species
Teloschistes sieberianus
Xanthoria ectanea

Cell 285

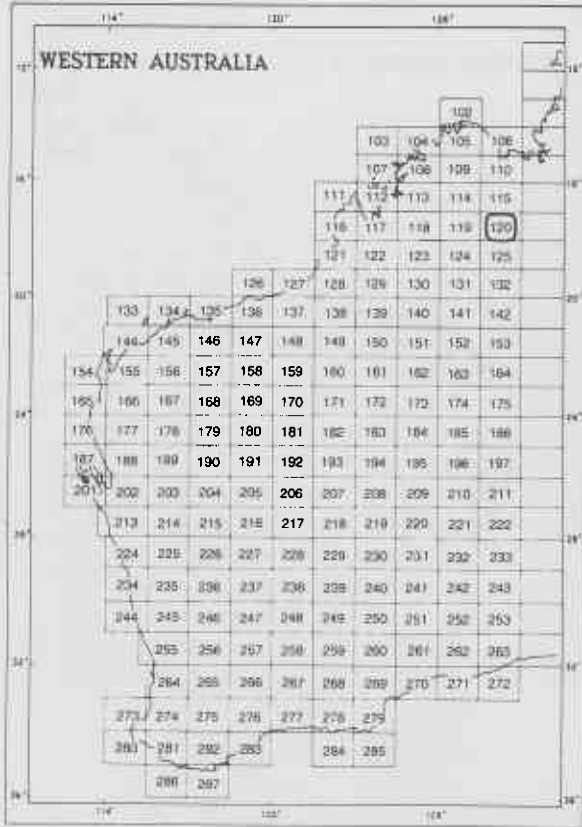
Cladia aggregata

2 species
Lecidea laeta

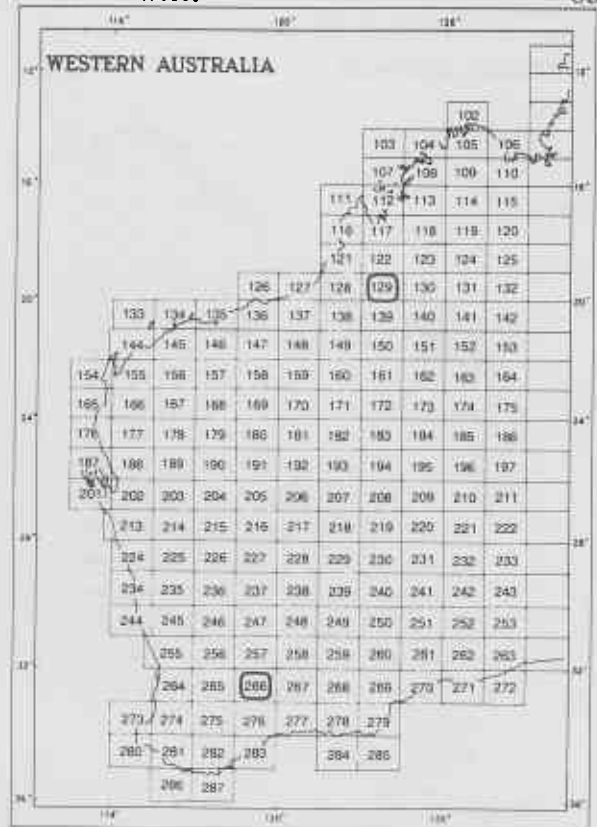
Cell 287

Bacidia aff. sabuletorum
Buellia stellulata
Caloplaca aurantiaca
Cladonia amaurocraea
Cladonia calycantha
Cladonia pityrea
Ephebe lanata
Graphis scripta
Heterodermia obscurata
Pannoparmelia wilsonii
Parmelia harrisii

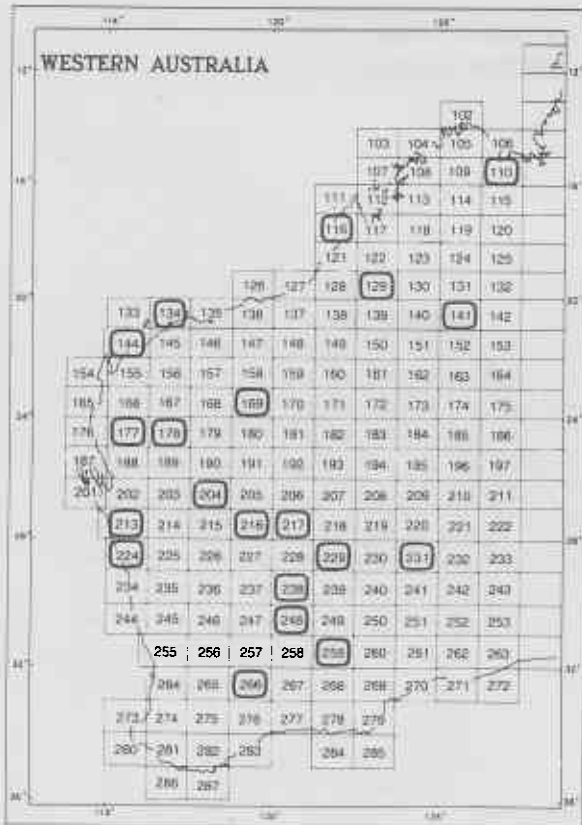
22 species
Parmelia pulla
Parmelia reticulata
Parmelia subsumpta
Parmelia tinctoria
Pertusaria leioplaca
Pseudocyphellaria aurata
Pseudocyphellaria australiensis
Pseudocyphellaria crocata
Sarcogyne clavus
Thysanothecium hyalinum
Xanthoria ectanea



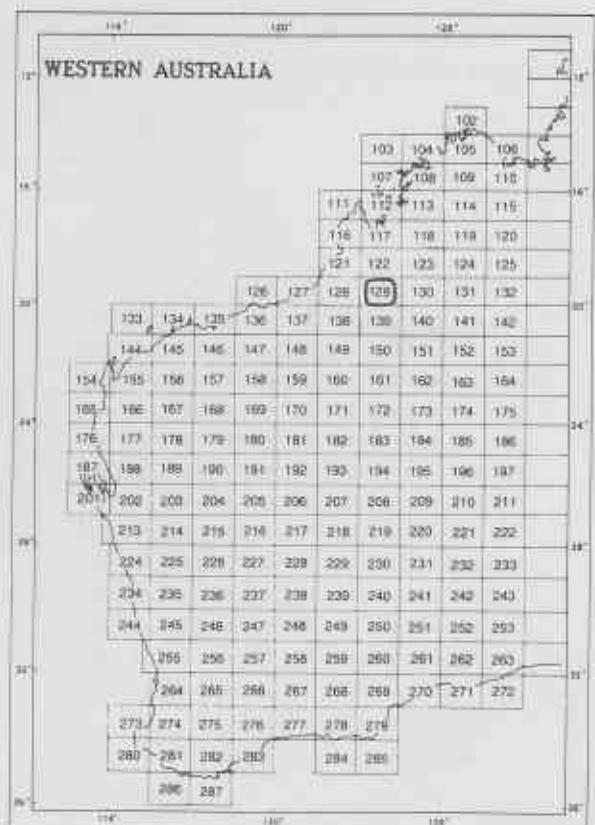
Acarospora flava (Bell.) Trev.



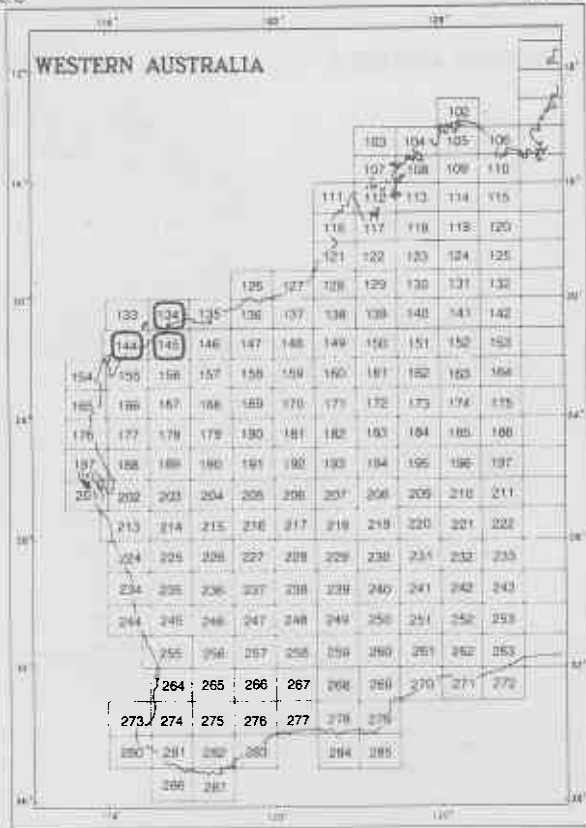
Acarospora novaehollandiae H.Magn.



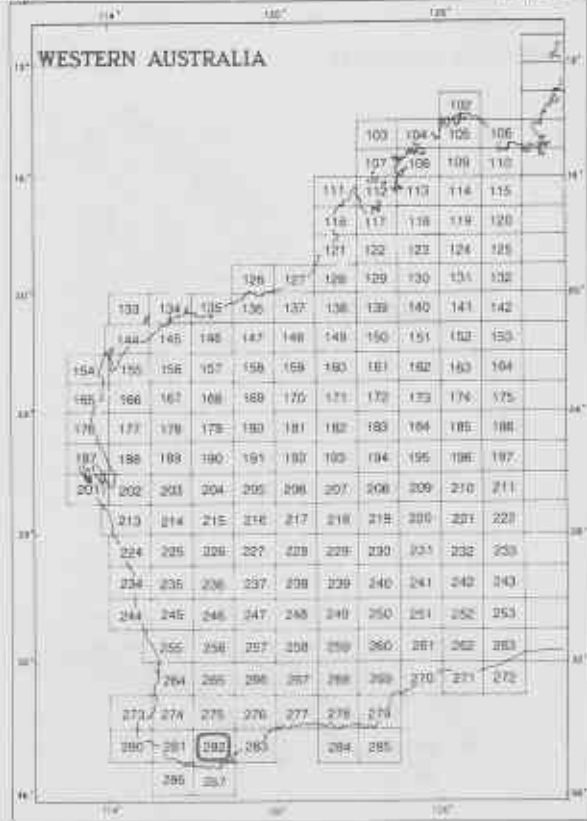
Acarospora schleicheri (Ach.) Mass.



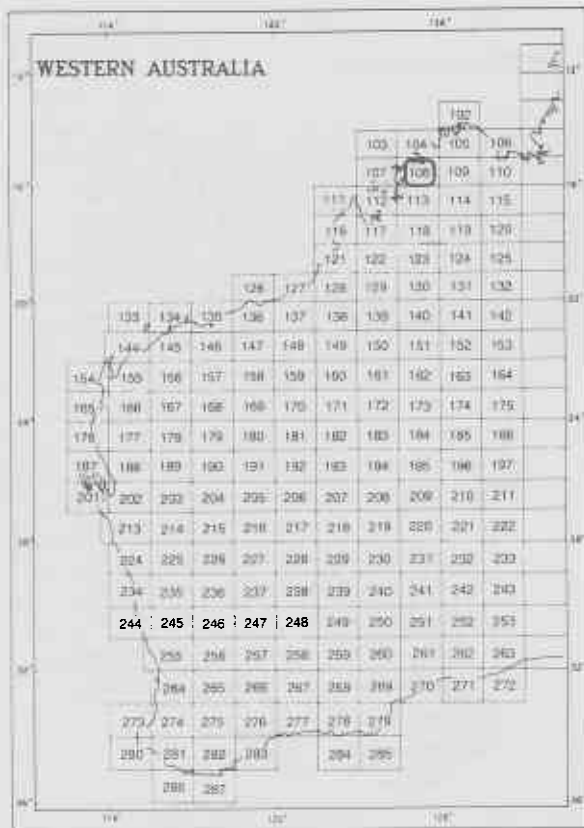
Acarospora sinopica (Wahlenb.) Koerb.



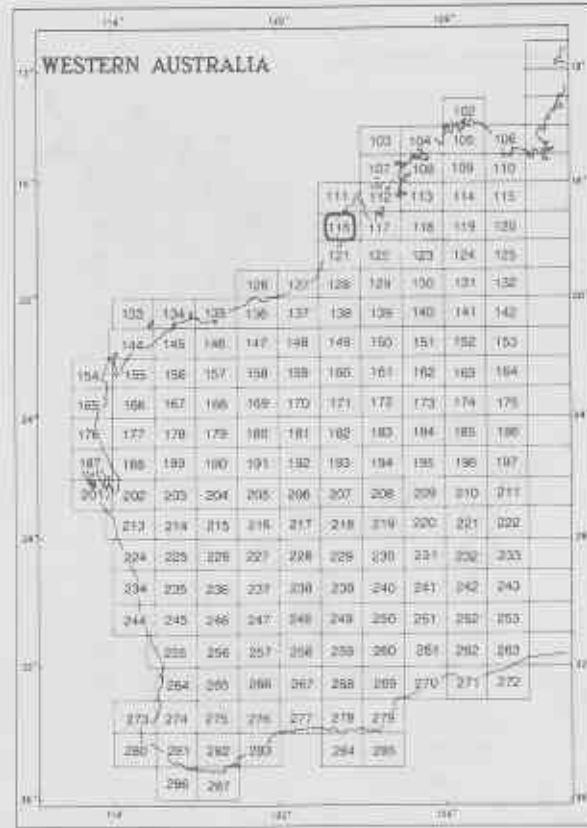
Anema sp.



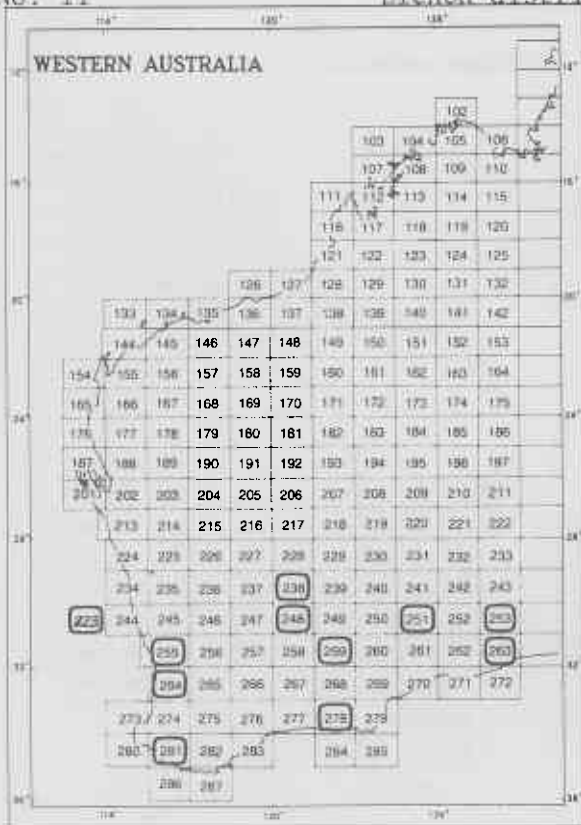
Arthonia sp.



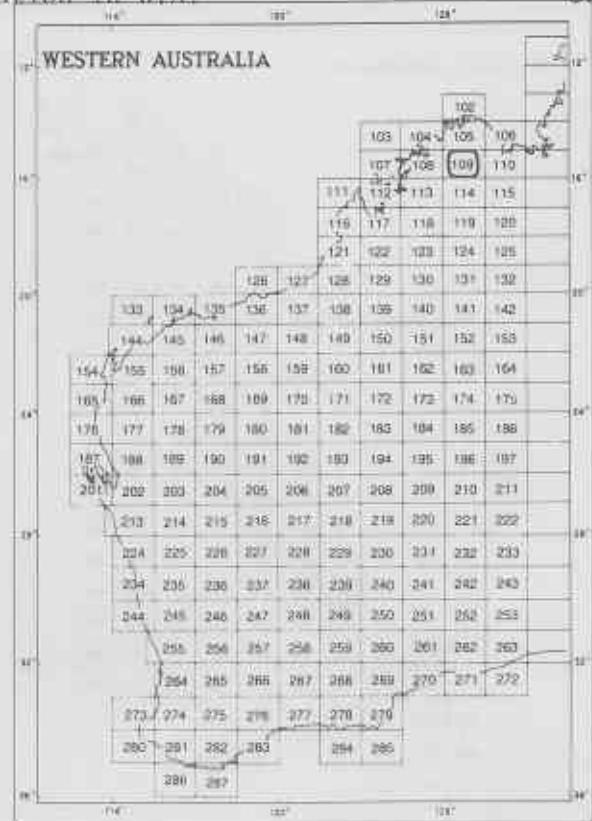
Arthrothelium interveniens (Nyl.) Zahlbr.



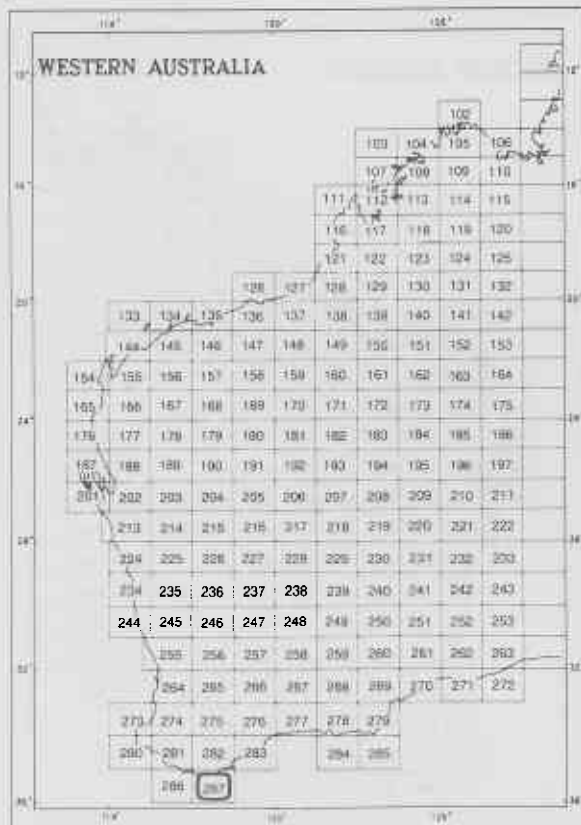
Arthropryenia aff. *fallax* (Nyl.) Arn.



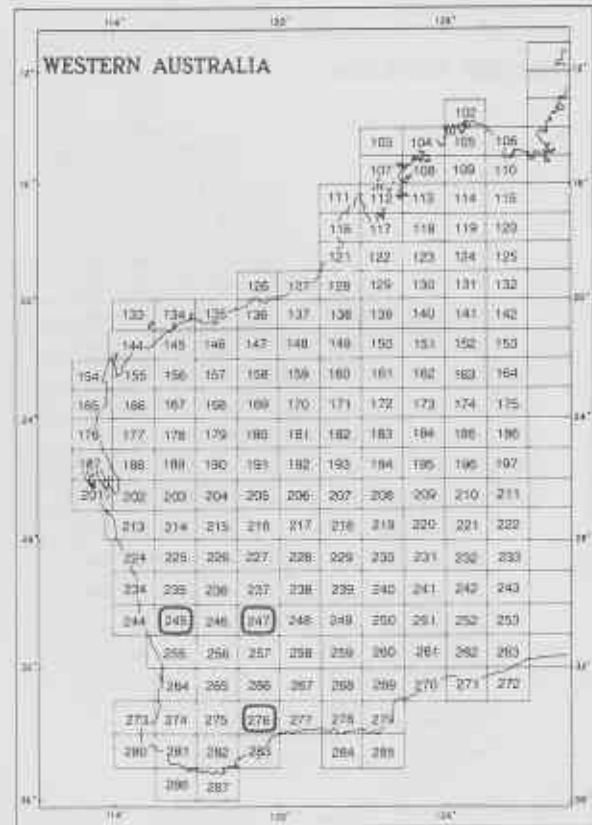
Aspicilia calcarea (L.) Mudd



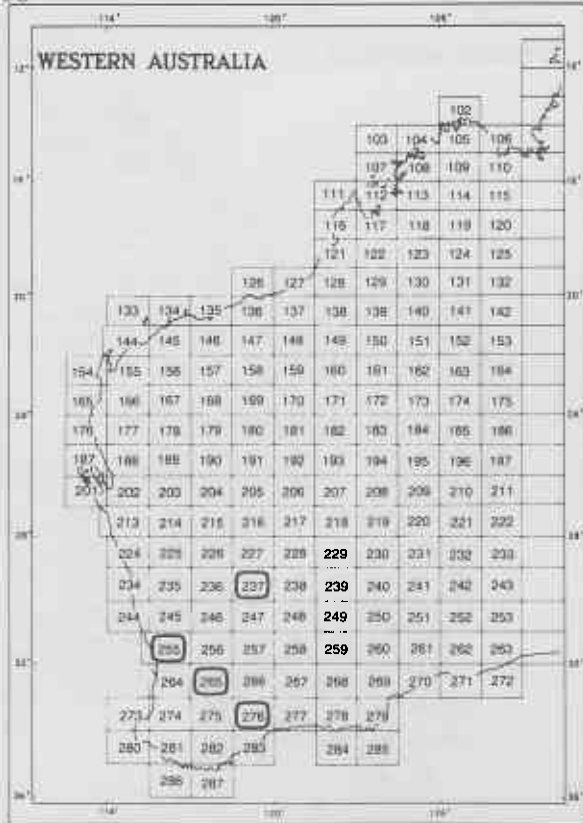
Bacidia microphyllina (Tuck.) Riddle



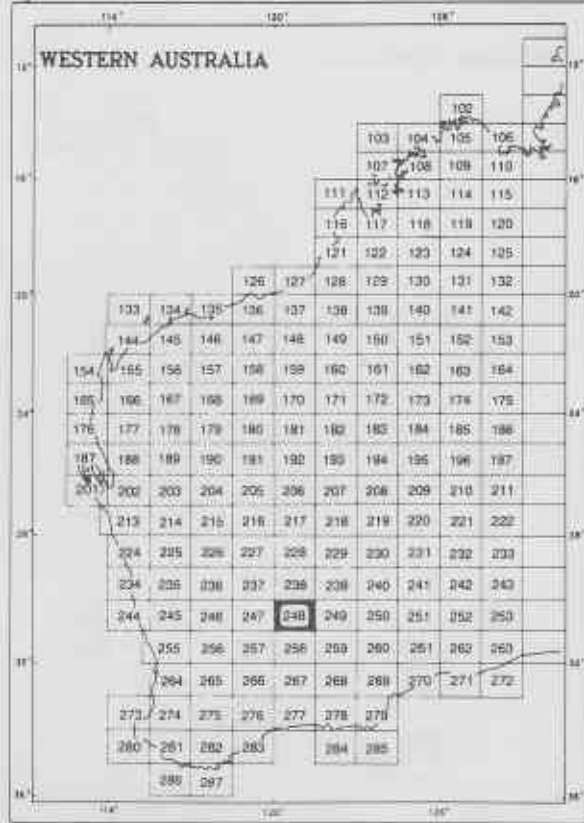
Bacidia aff. sabuletroum (Schreb.)
Leh.



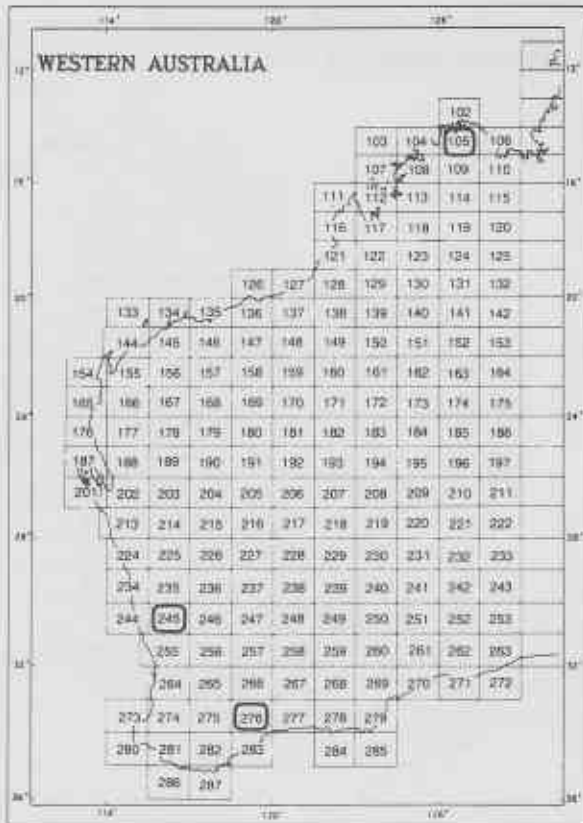
Blastenia sp.



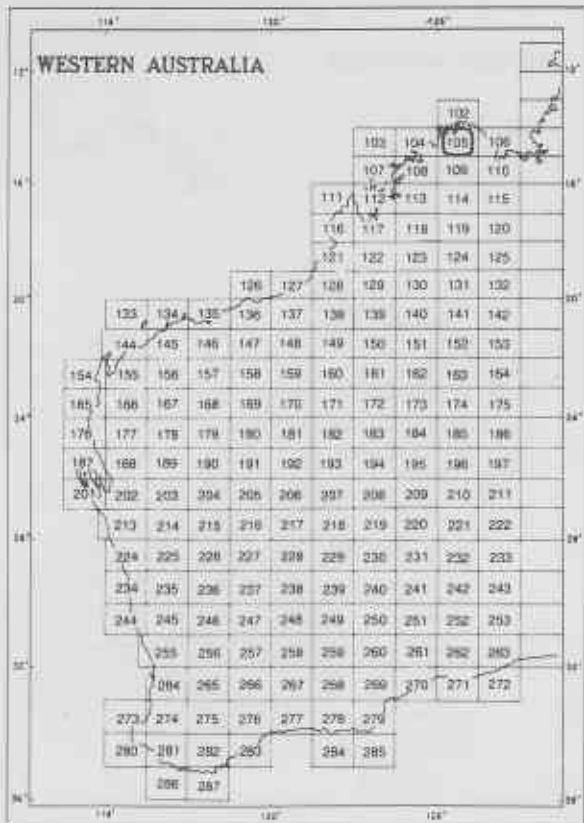
Buellia disciformis (Fr.) Mudd



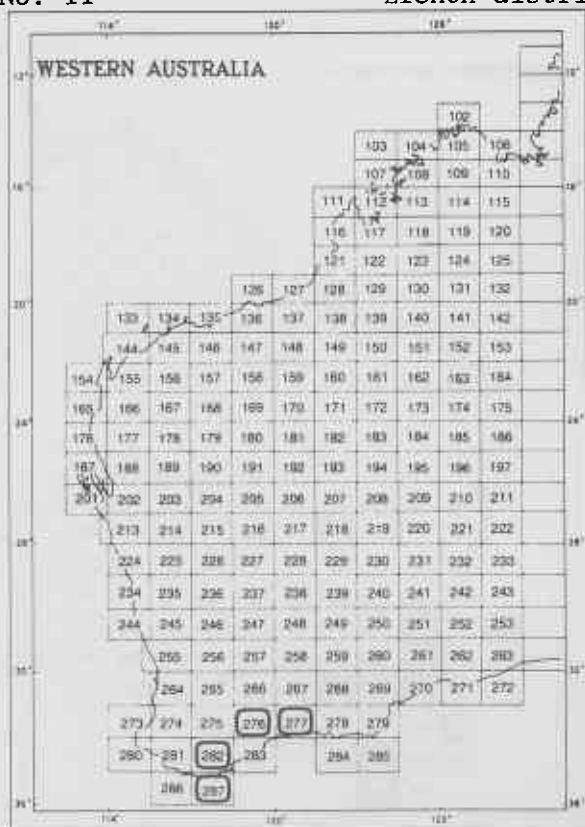
**Buellia glomerulans* (Muell. Arg.) Zahlbr.



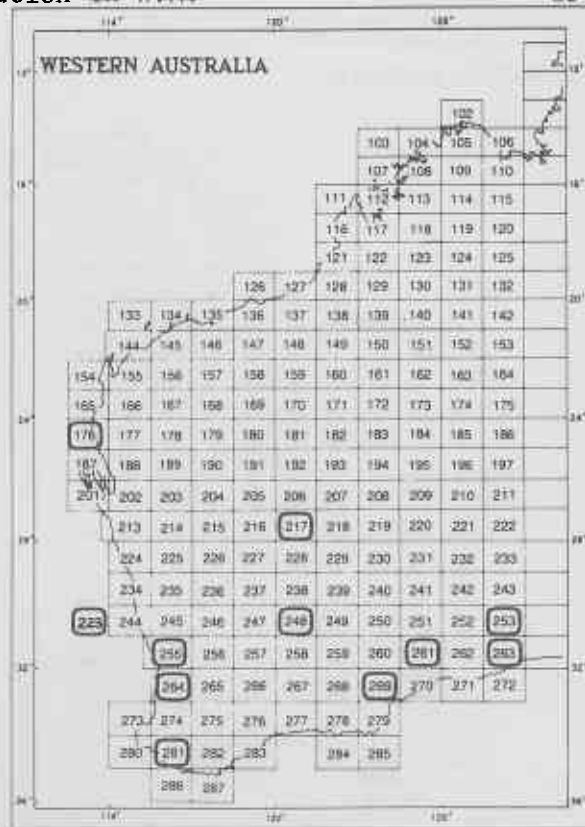
Buellia punctata (Hoffm.) Massal.



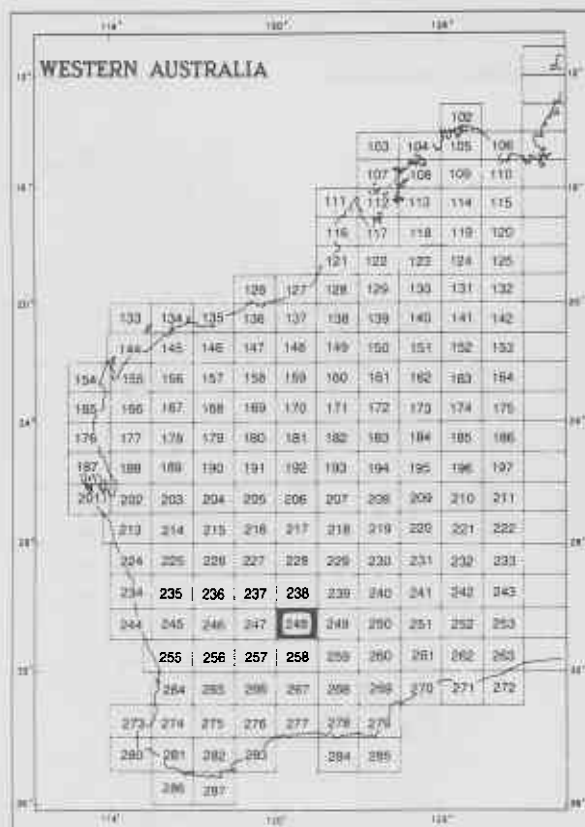
Buellia retrovertens Tuck



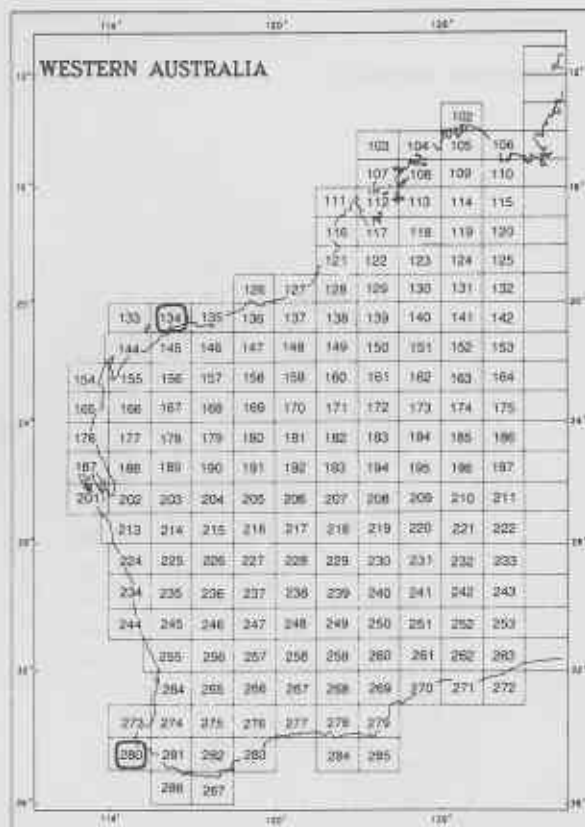
Buellia stellulata (Tayl.) Mudd



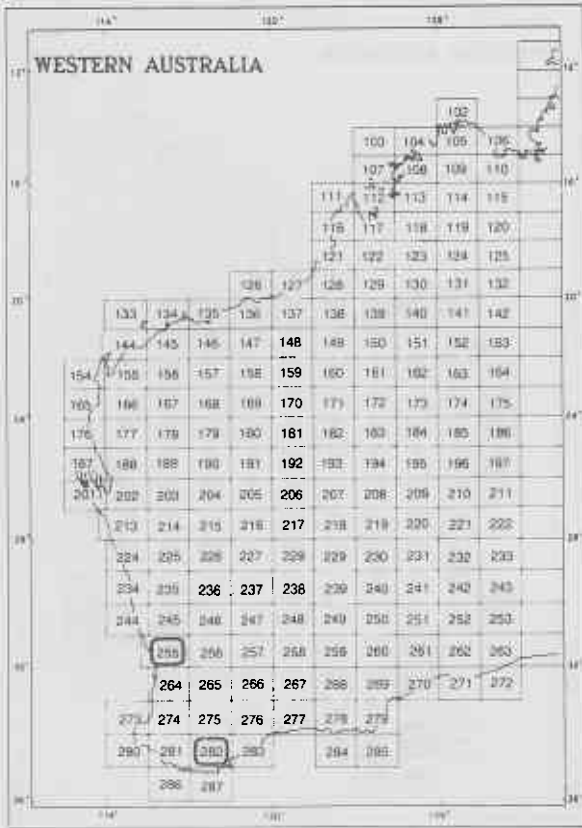
Buellia subalbula (Nyl.) Muell. Arg.



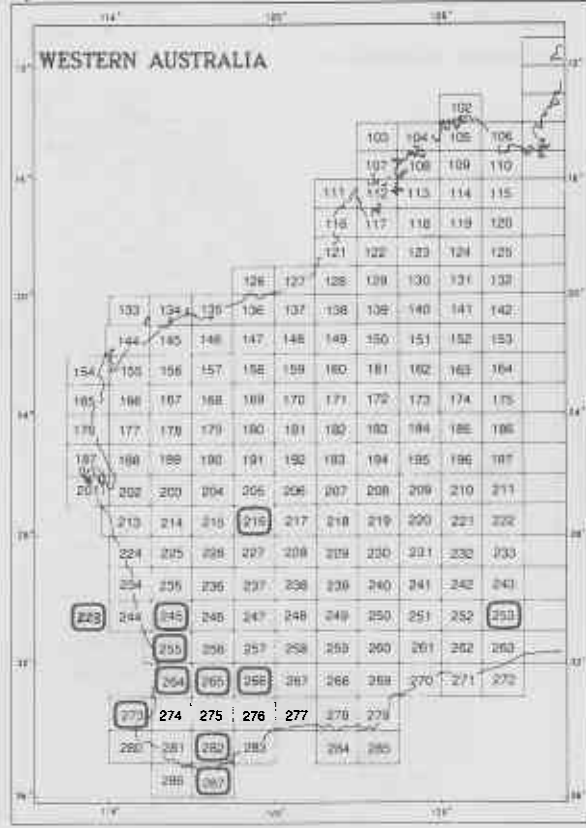
**Buellia subcoronata* (Muell.) Arg.)
Malme



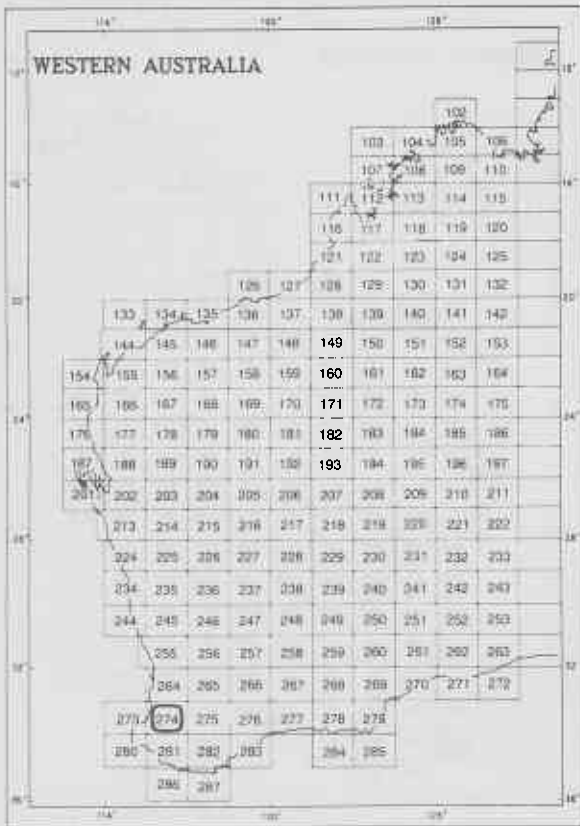
Buellia subdisciformis (Leight.) Vain.



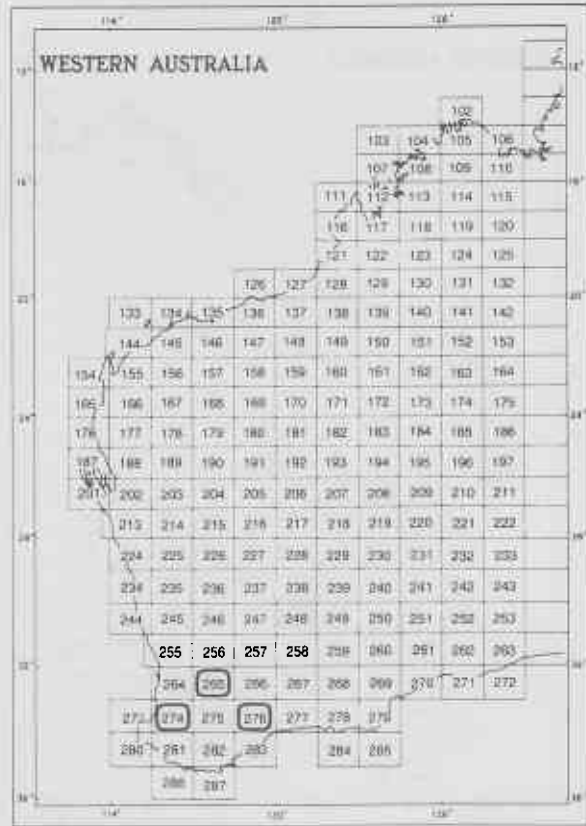
Calicium sp.



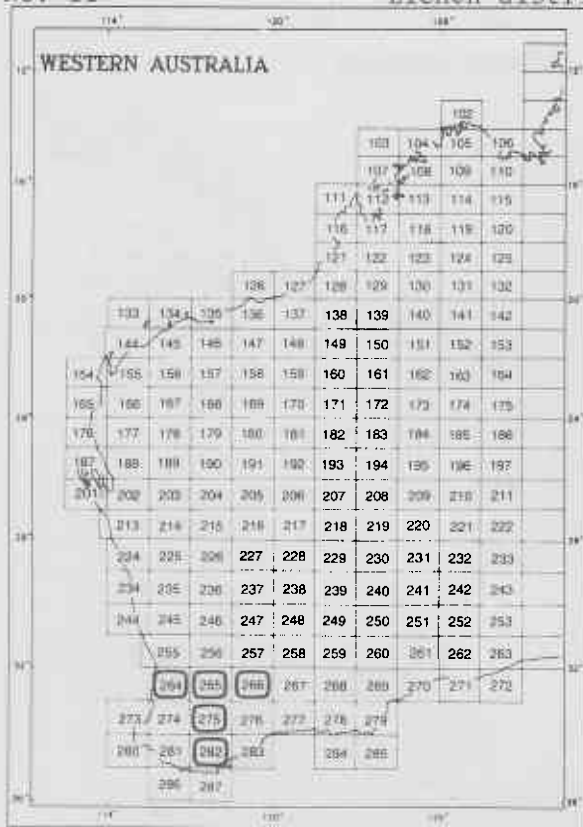
Caloplaca aurantiaca (Lightf.) Th.Fr.



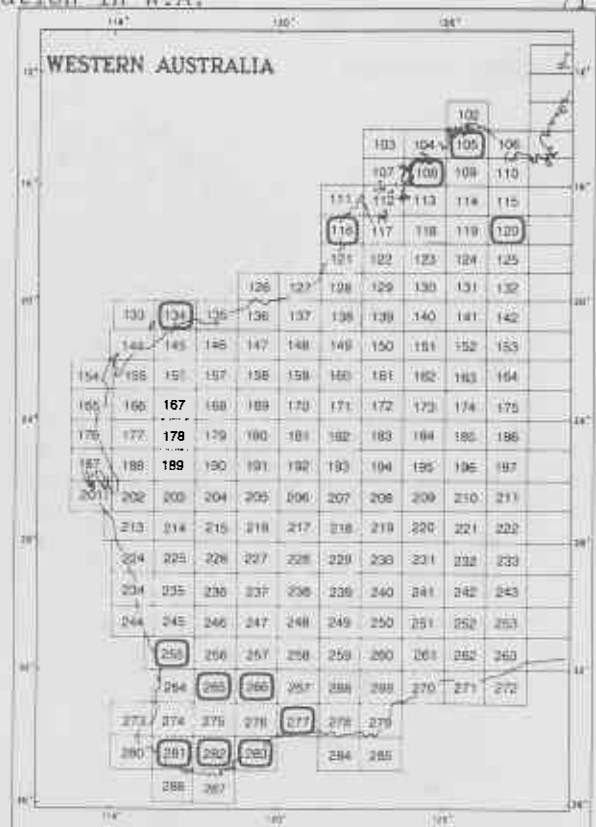
Caloplaca cerina (Ehrh. ex Hoffm)
Th. Fr.



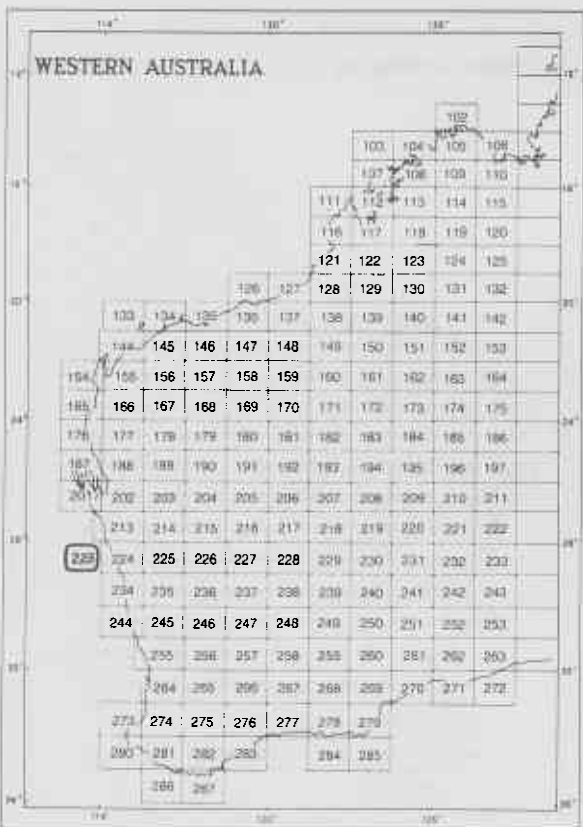
Caloplaca citrina (Hoffm.) Th.Fr.



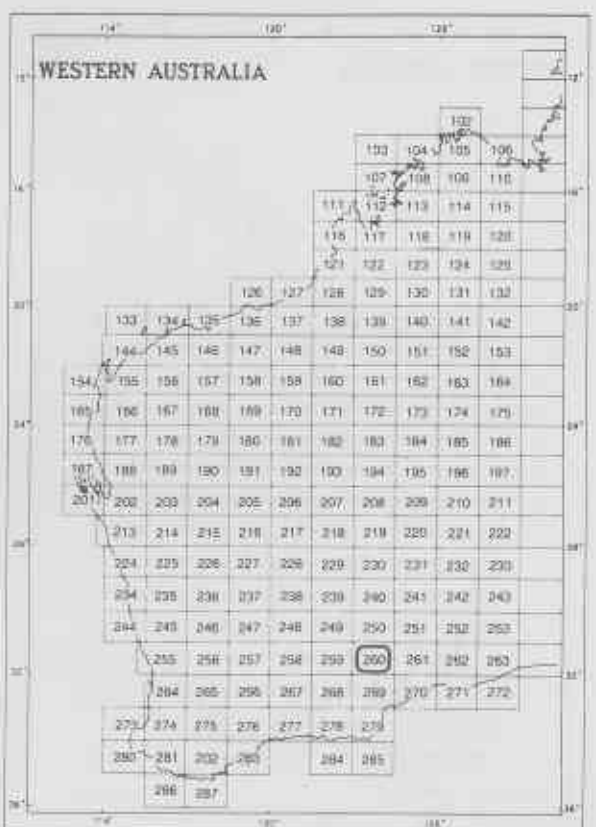
Caloplaca ferruginea (Huds.) Th.Fr.



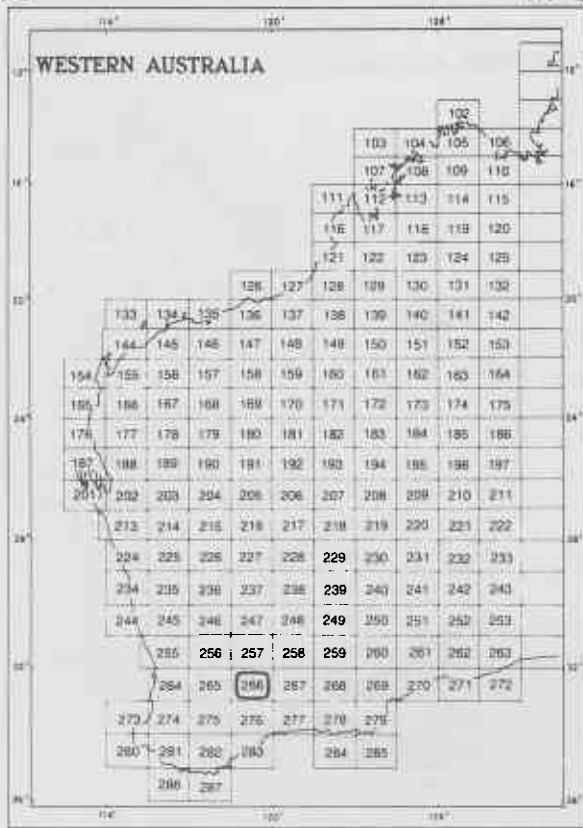
Caloplaca fulgens Koerb.



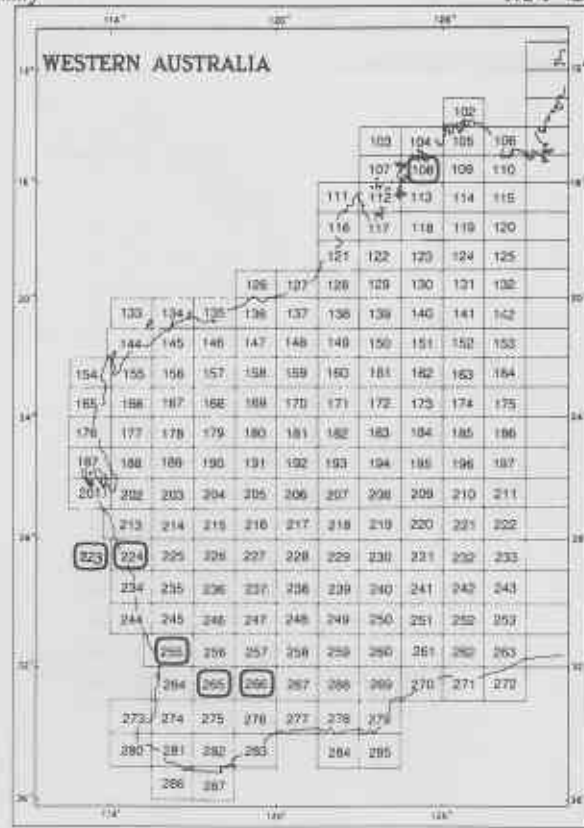
Caloplaca holocarpa (Hoffm.) Wade



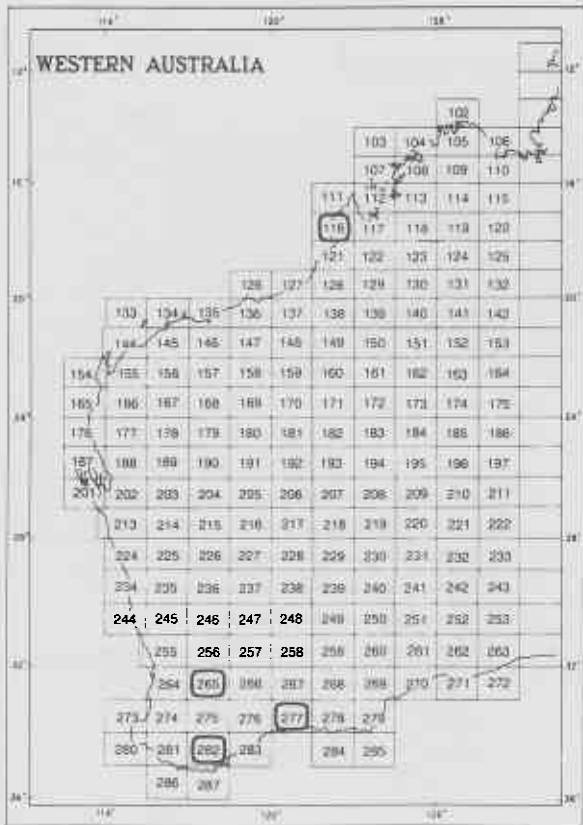
Candelaria concolor (Dicks.) Stein



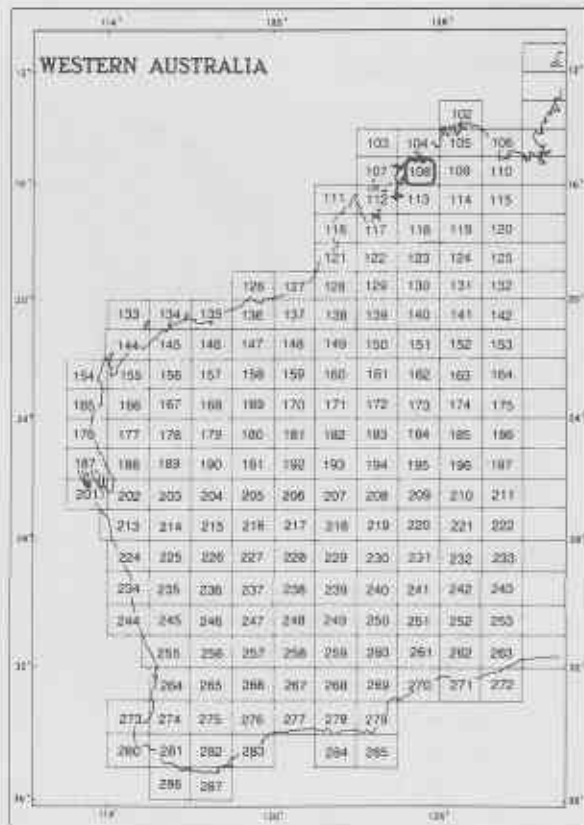
Candelariella spraguei (Tuck.)
Zahlbr.



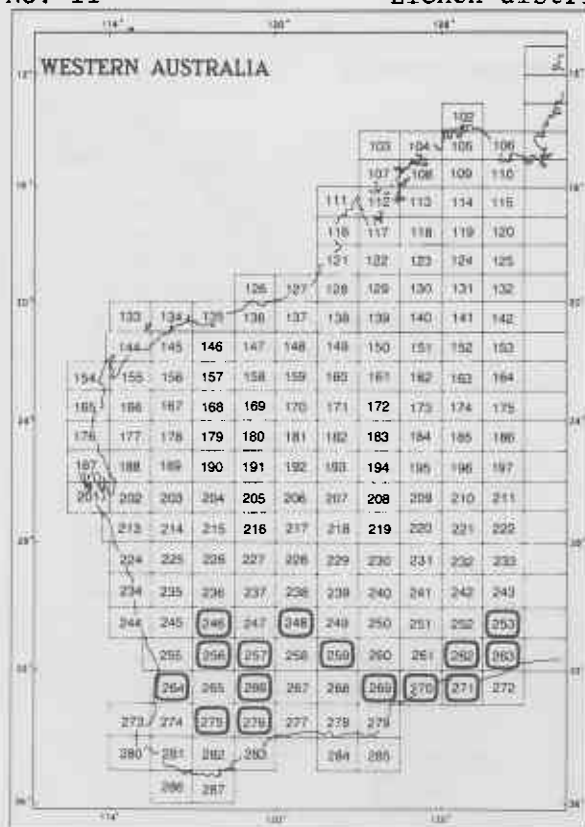
Candelariella vitellina (Hoffm.)
Muell. Arg.



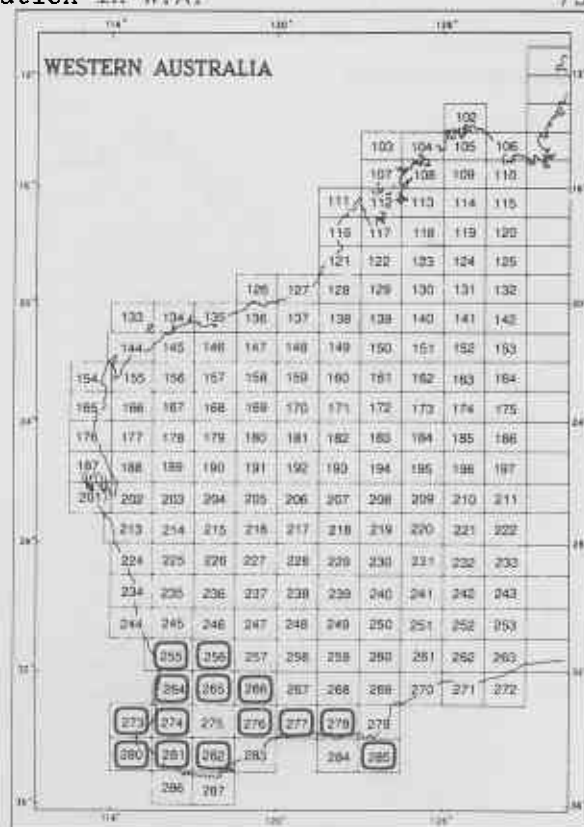
Catillaria sp.



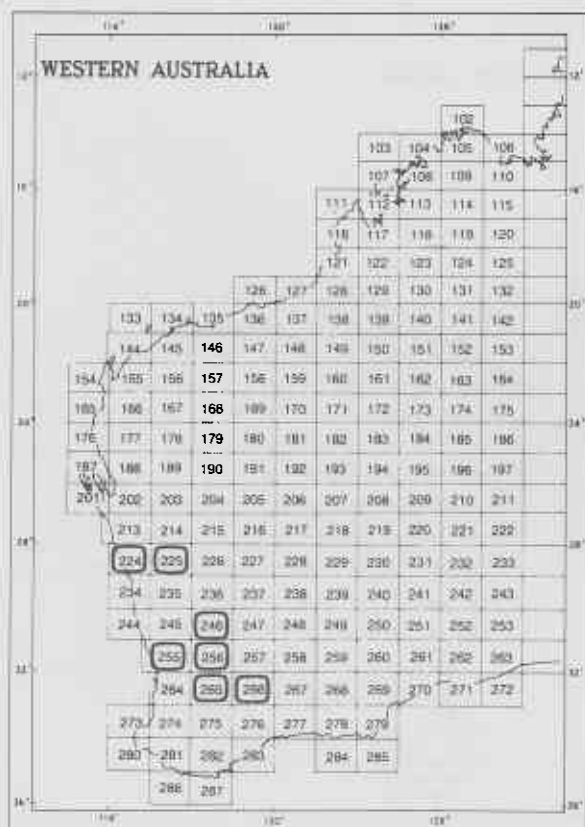
Chaenotheca melanophaea (Ach.) Zw.



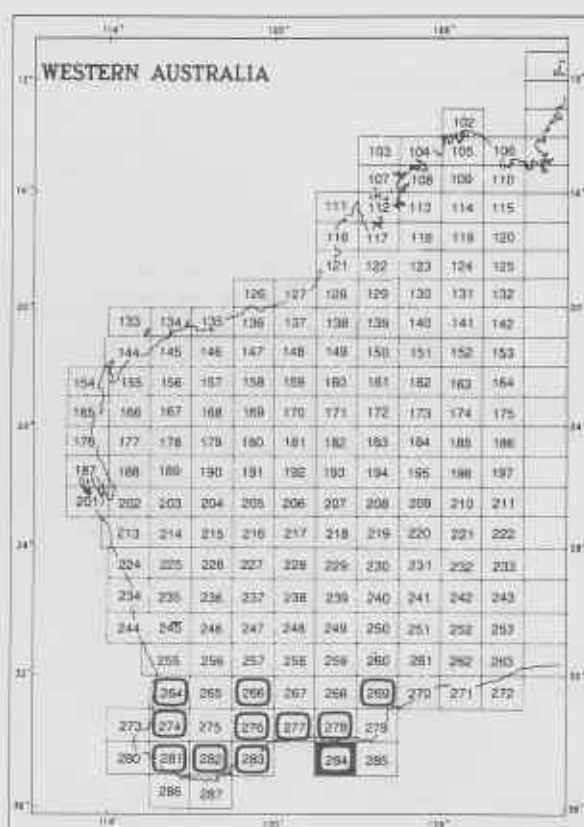
Chondropsis semiviridis (F.Muell. ex Nyl.) Nyl.



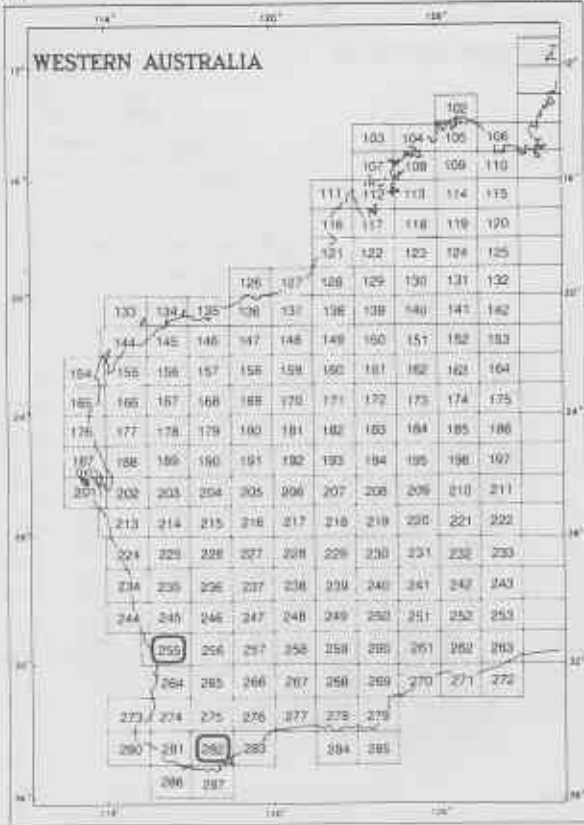
Cladia aggregata (Sw.) Nyl.



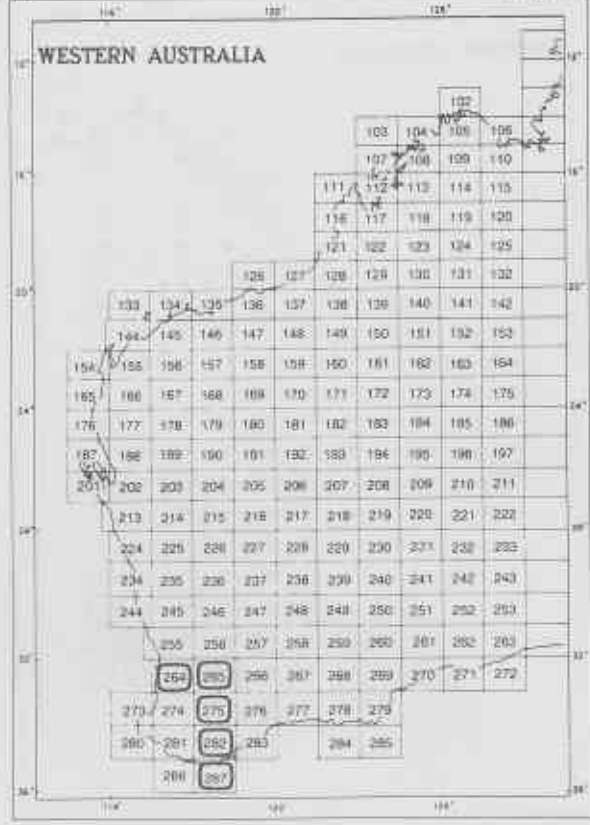
Cladia corallaizon R.Filson



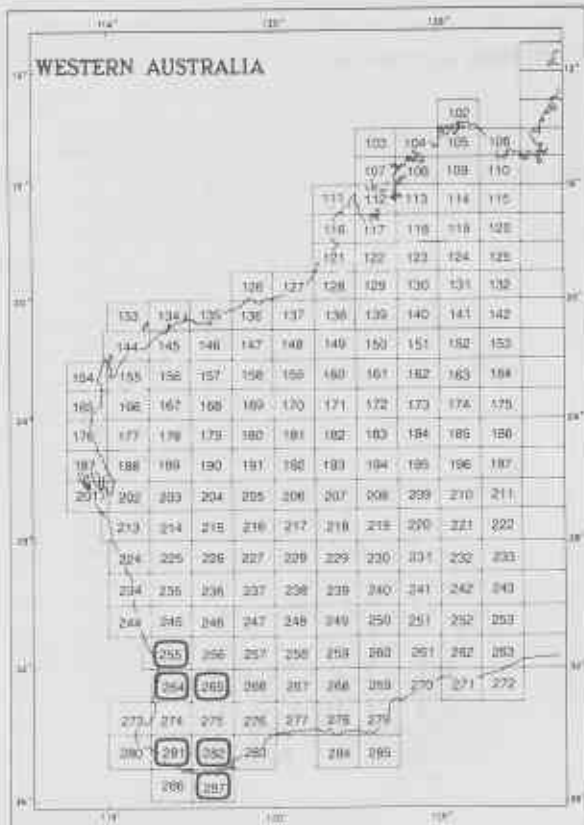
**Cladia ferdinandii* (Muell.Arg.) R.Filson



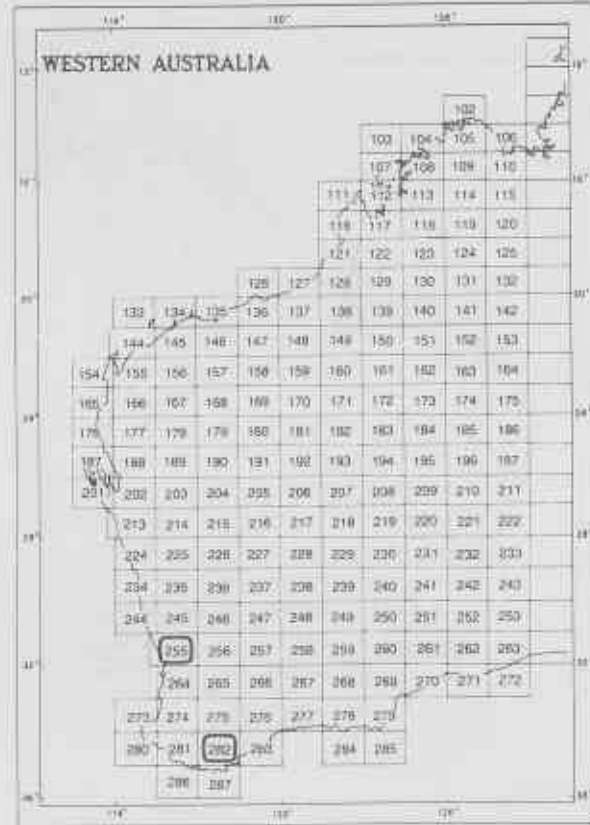
Cladia schizopora (Nyl.) Nyl.



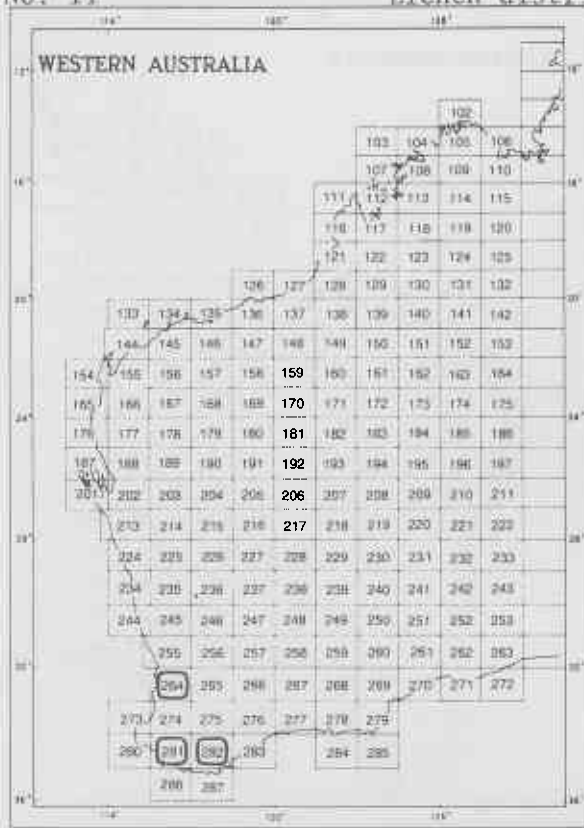
Cladonia amaurocraea (Flk.) Schaer.



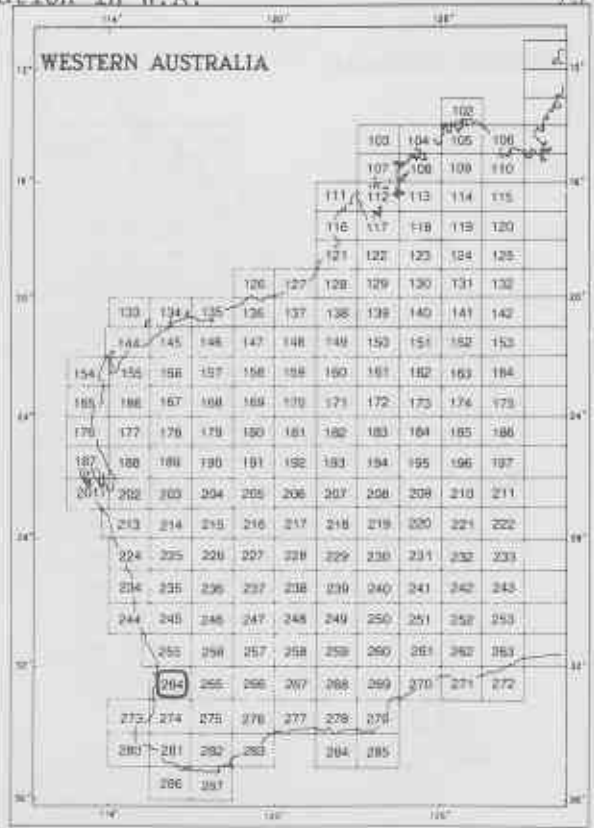
Cladonia calycantha Del. ex Nyl.



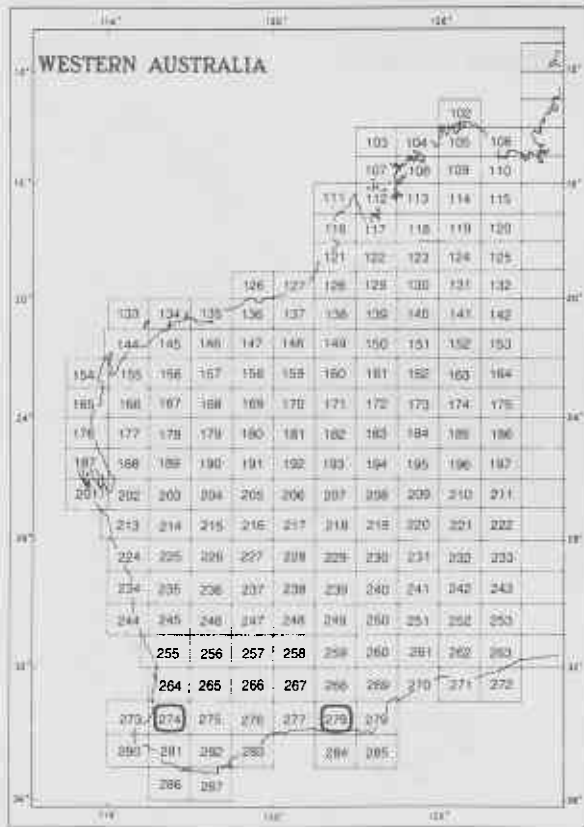
Cladonia cariosa (Ach.) Spreng.



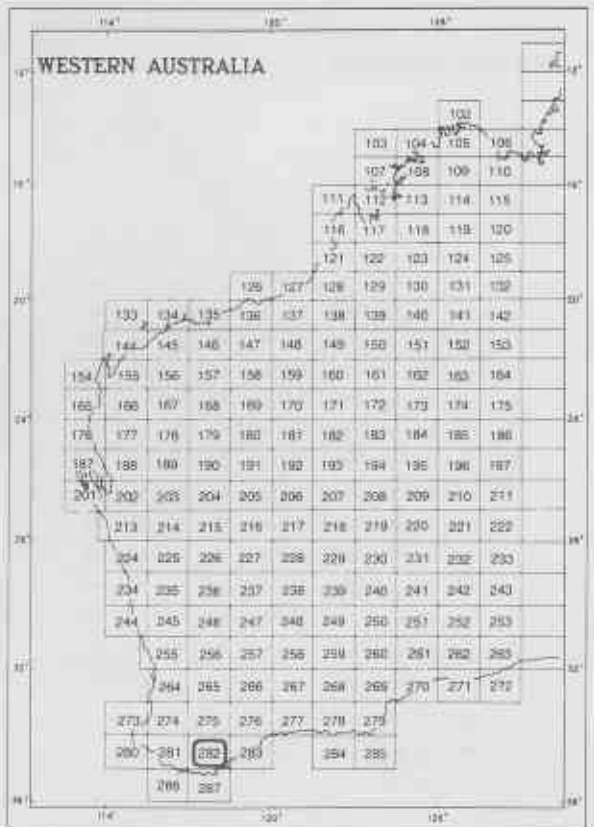
Cladonia chlorophaea (Flk.) Spreng.



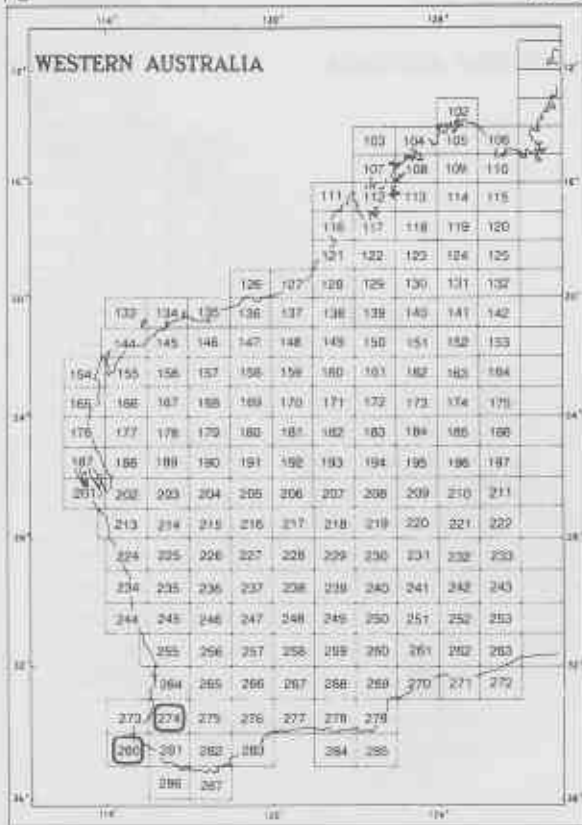
Cladonia coniocraea (Flk.) Sandst.



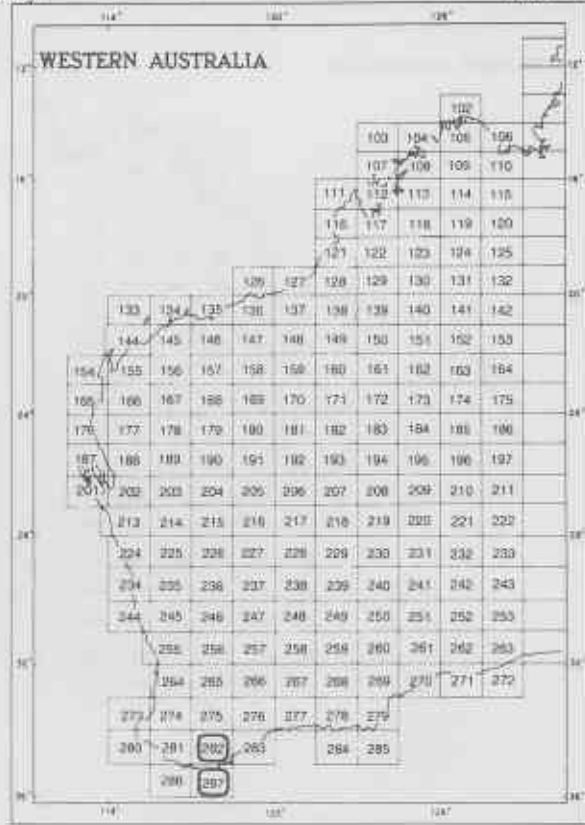
Cladonia degenerans (Flk.) Spreng.



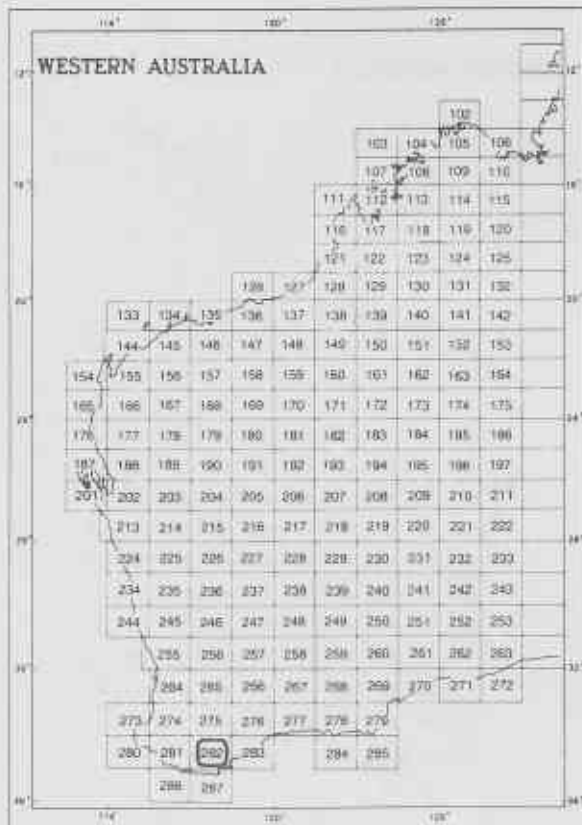
Cladonia furcata (Huds.) Schrad.



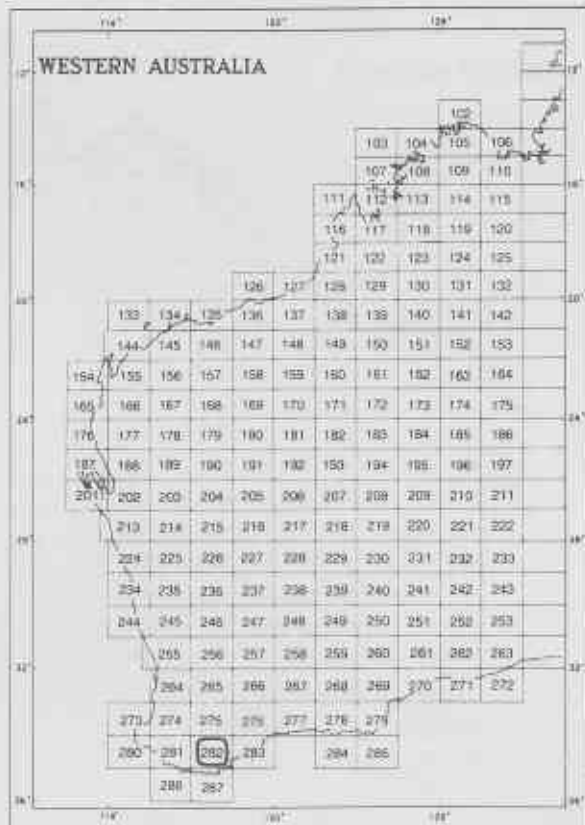
Cladonia krempelhuberi (Vain.) Vain.



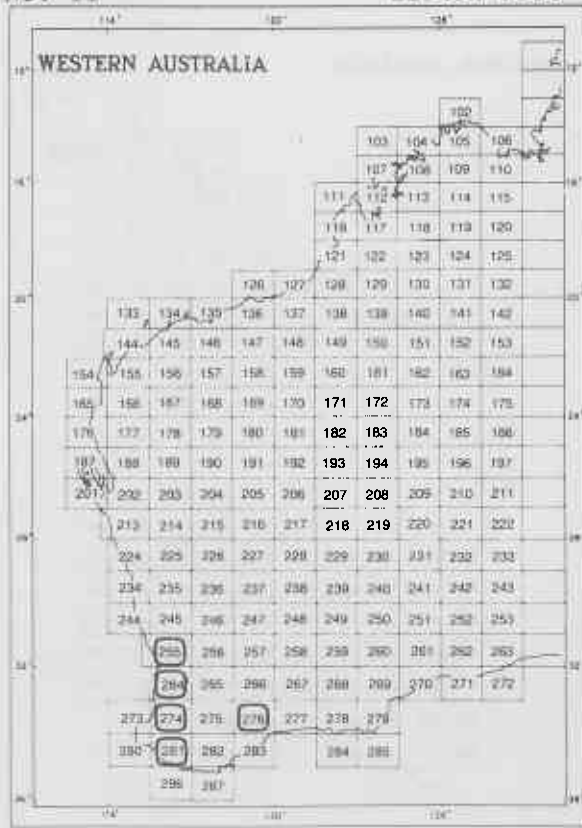
Cladonia pityrea (Flk.) Fr.



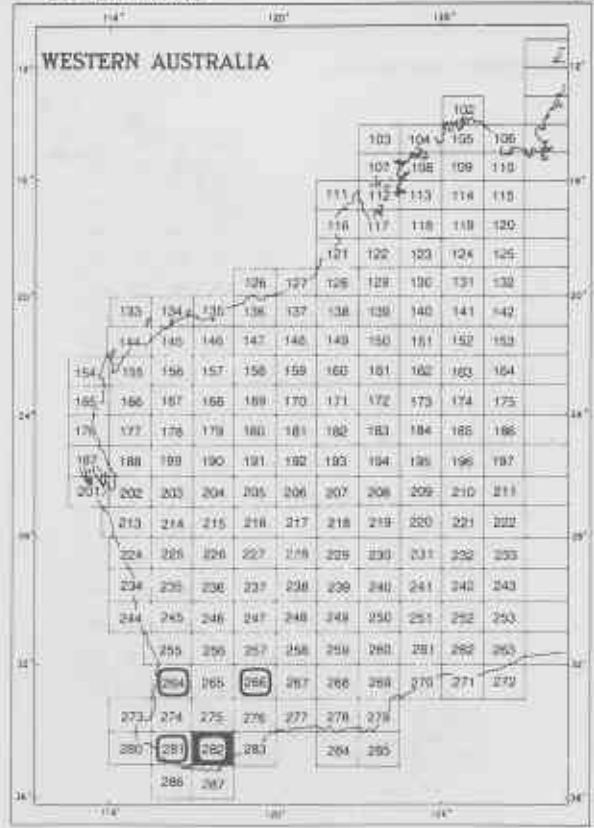
Cladonia polydactyla Nyl.



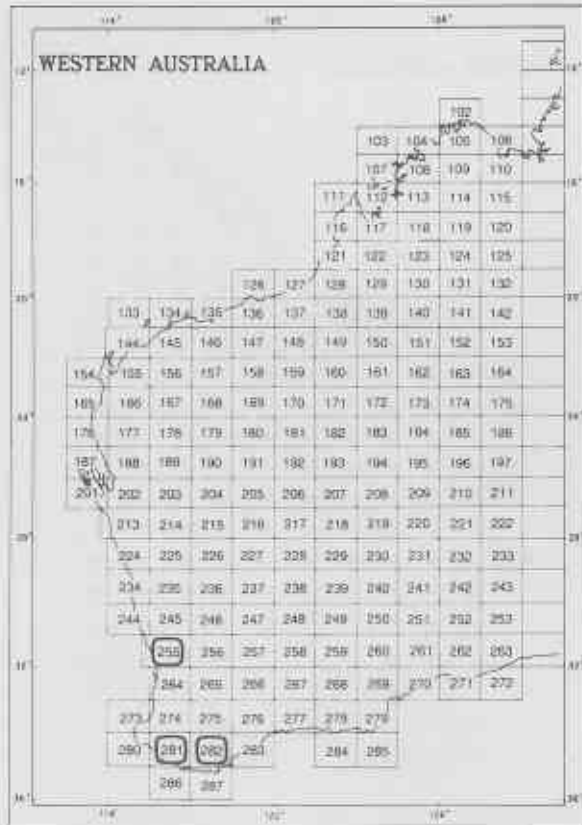
Cladonia pyxidata (L.) Hoffm.



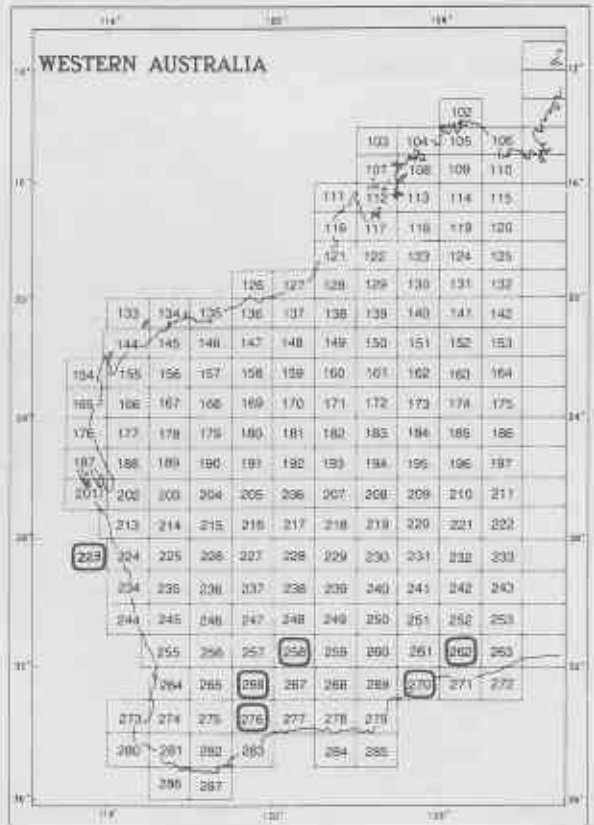
Cladonia verticillata (Hoffm.)
Schaer.



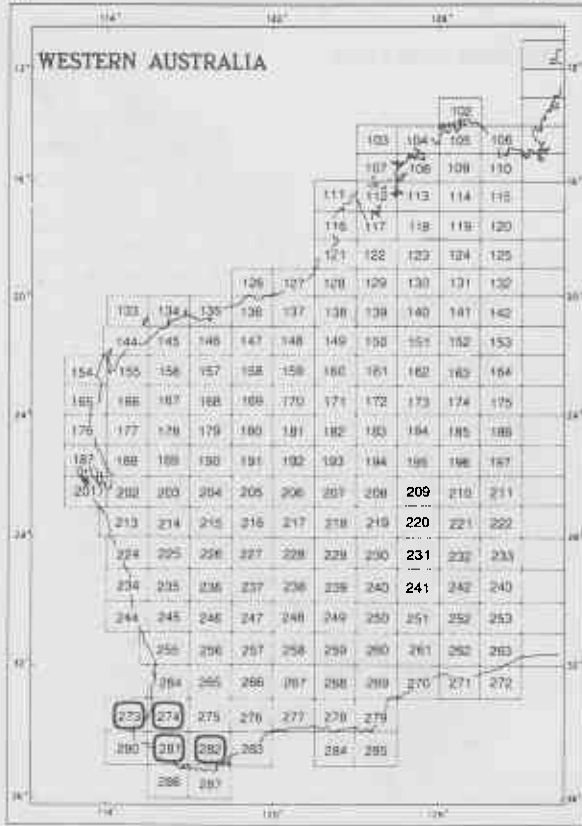
**Cladonia xanthoclada* Muell. Arg.



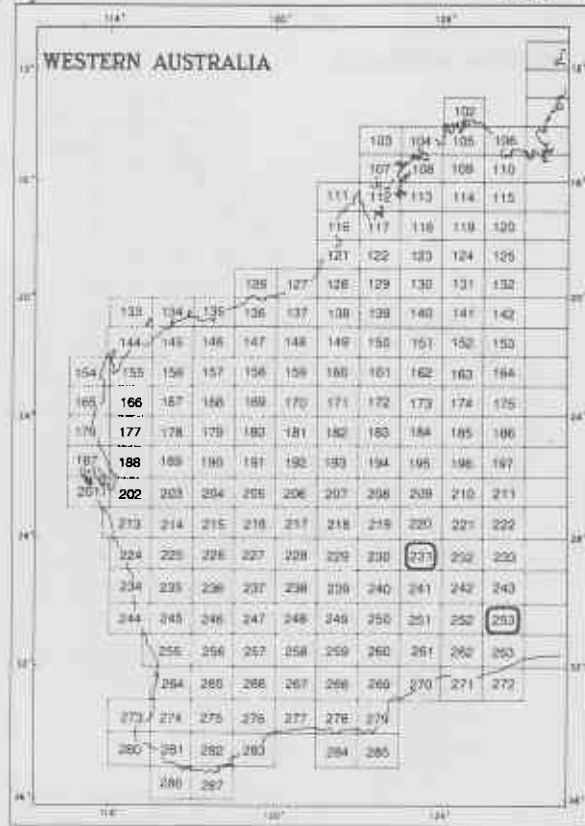
Coccocarpia erythroxili (Spreng.)
Swinscow & Krog



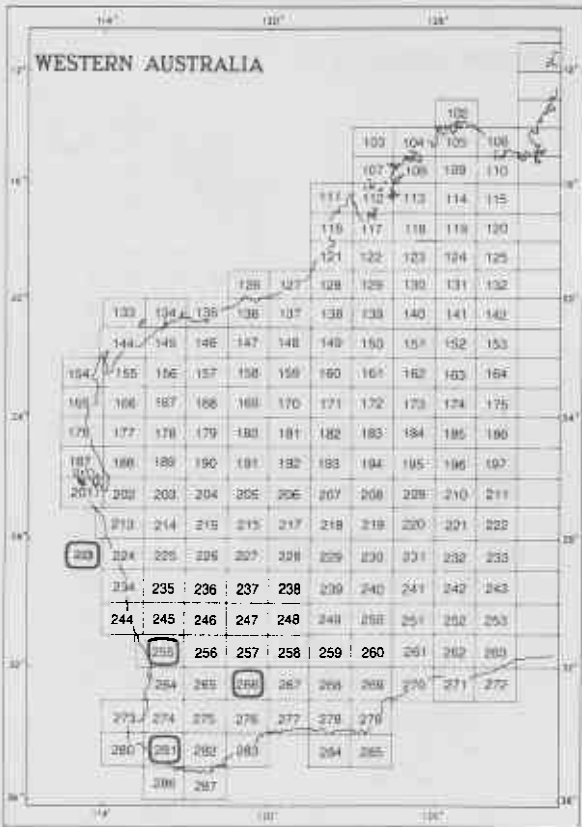
Collema coccophorum Tuck.



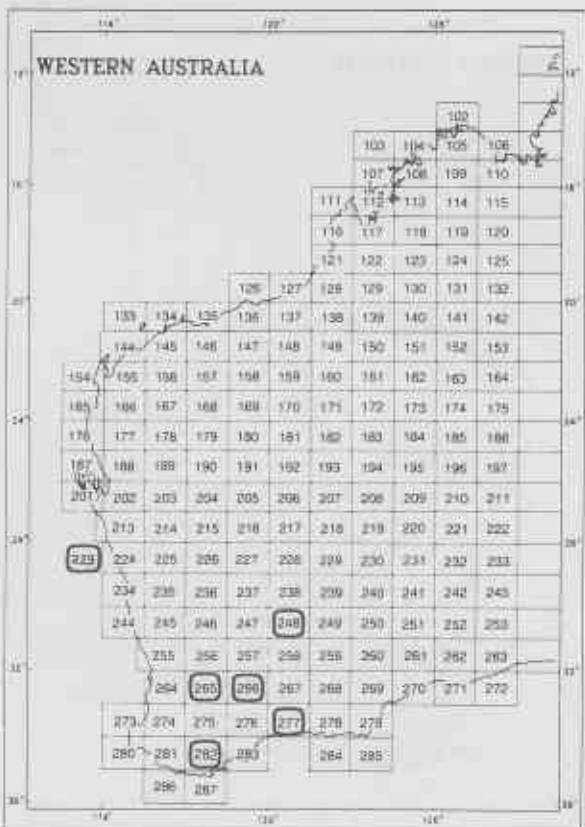
Collema glaucophthalmum Nyl.



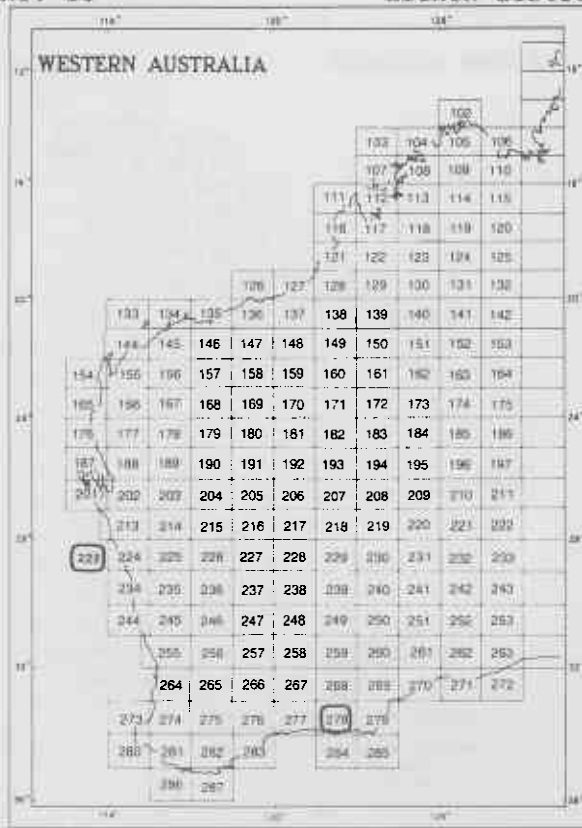
Dermatocarpon compactum (Mass.) Lettau.



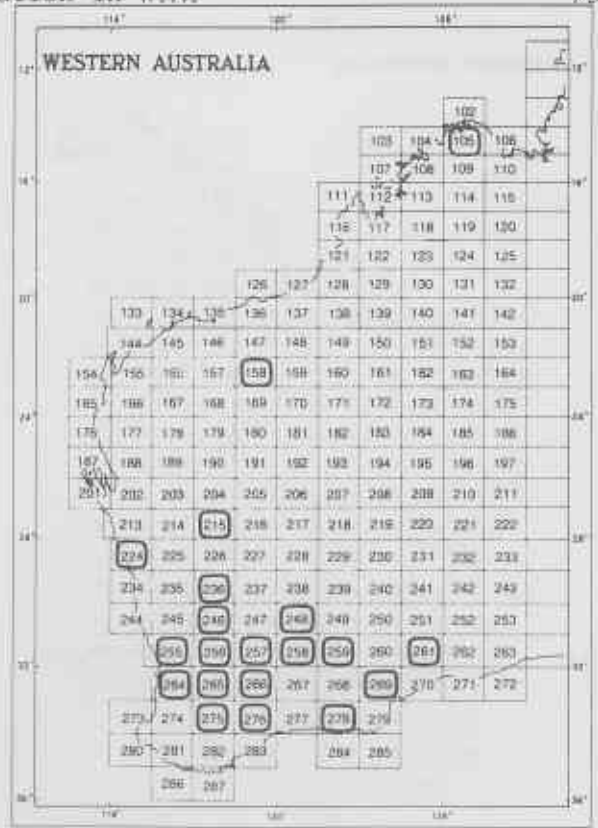
Dermatocarpon hepaticum (Ach.) Th.Fr.



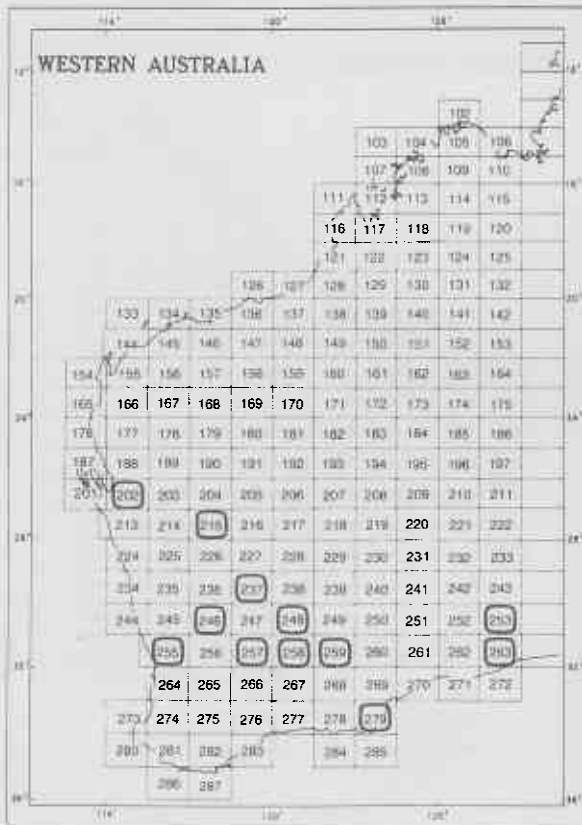
Dermatocarpon lachneum (Ach.) A.L.Sm.



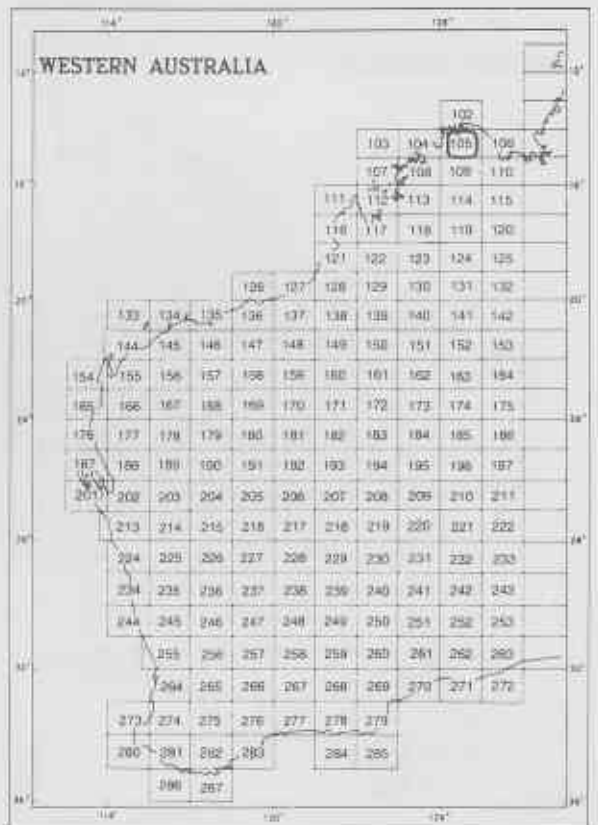
Diploicia canescens (Dicks.) Mass.



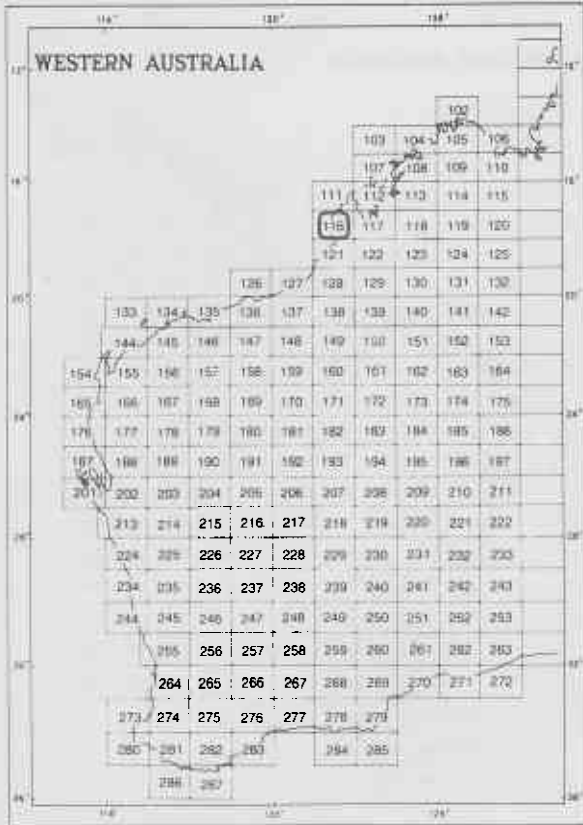
Diploschistes scruposus (Schreb.) Norm.



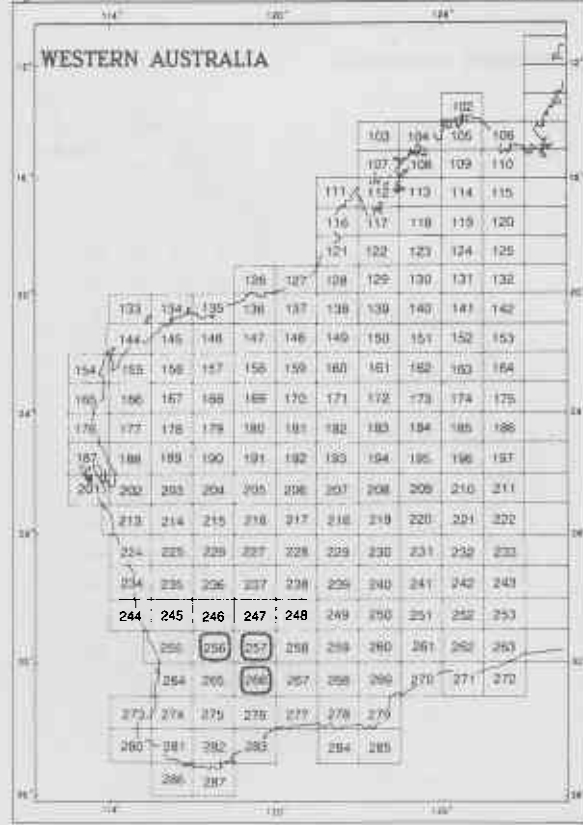
Diploschistes subocellatus (Nyl.) Zahlbr.



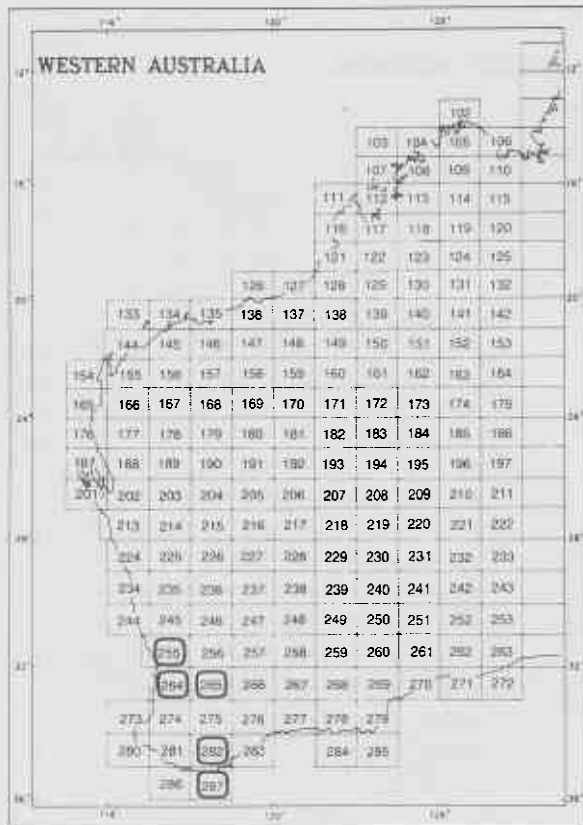
Dirinaria aegialita (Afz. in Ach.) Moore



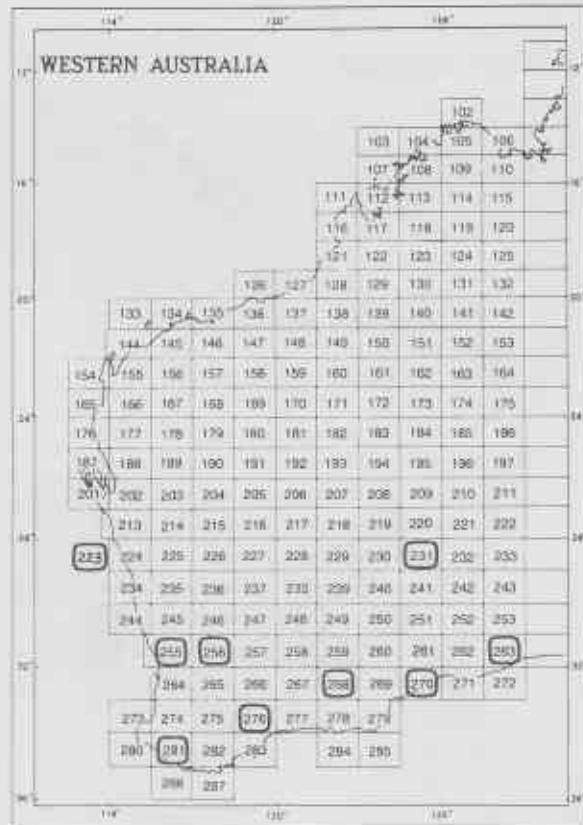
Dirinaria applanata (Fée) Awasthi



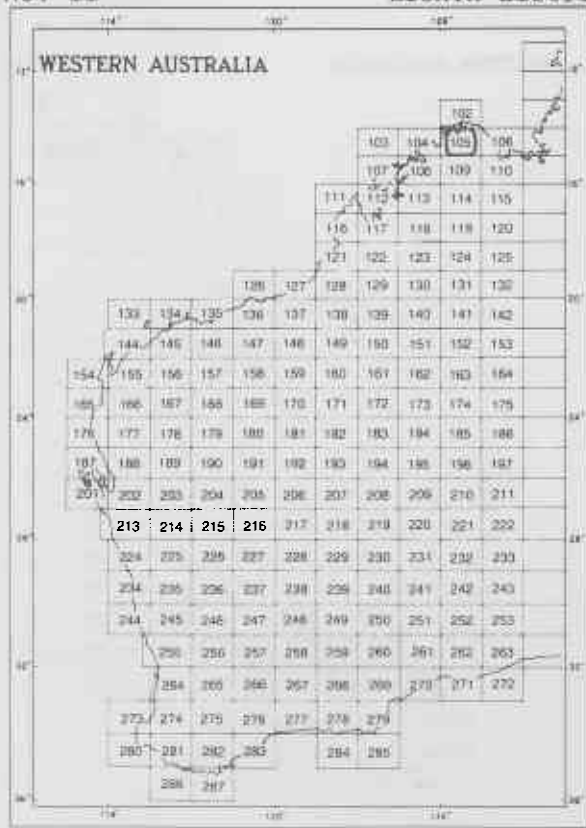
Endocarpon helmsianum Muell. Arg.



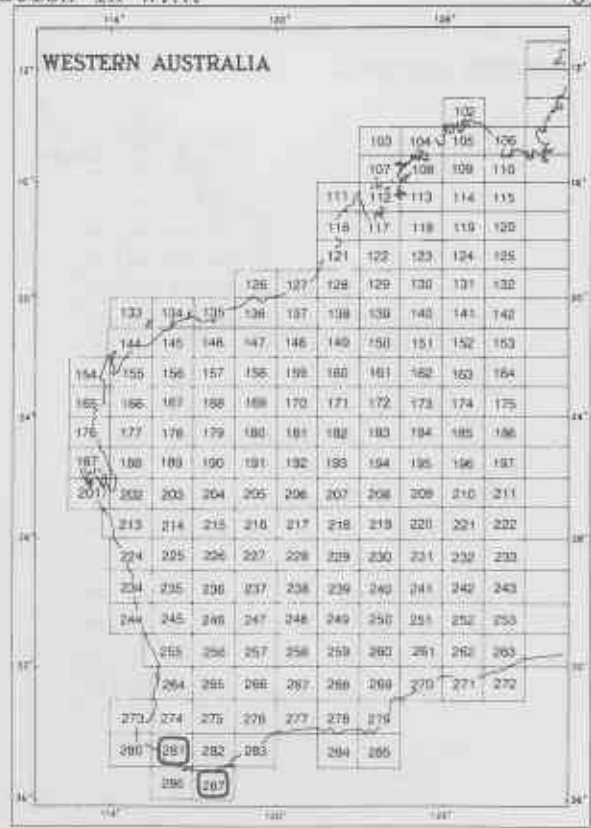
Ephebe lanata (L.) Vain.



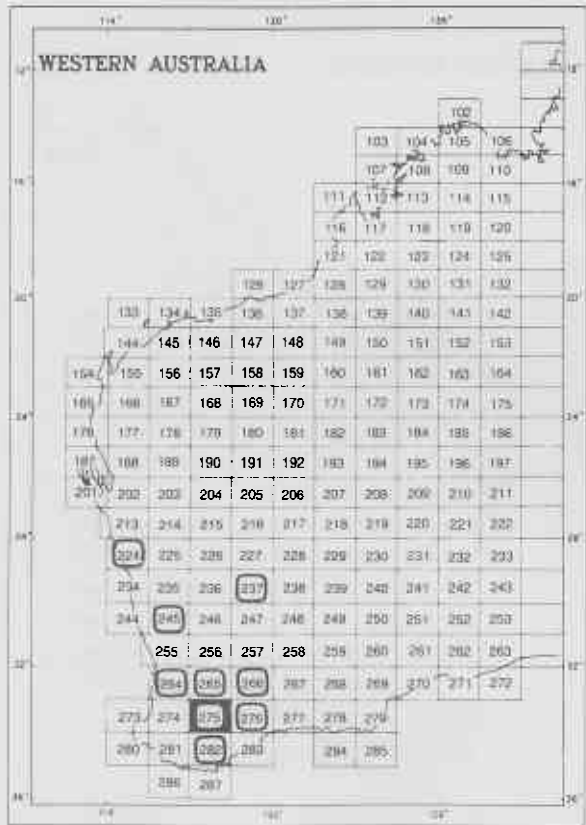
Fulgensia bracteata (Hoffm.) Jatta



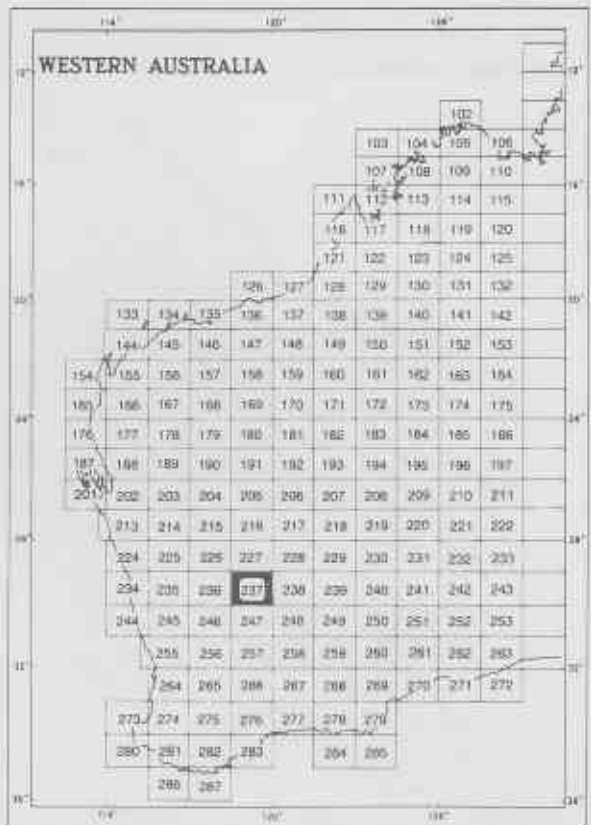
Graphis afzelii (Fée) Ach.



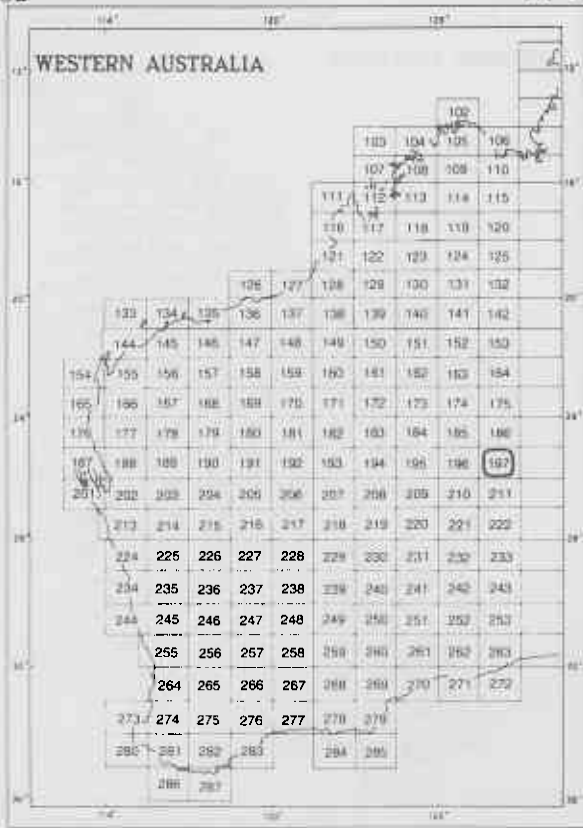
Graphis scripta (L.) Ach.



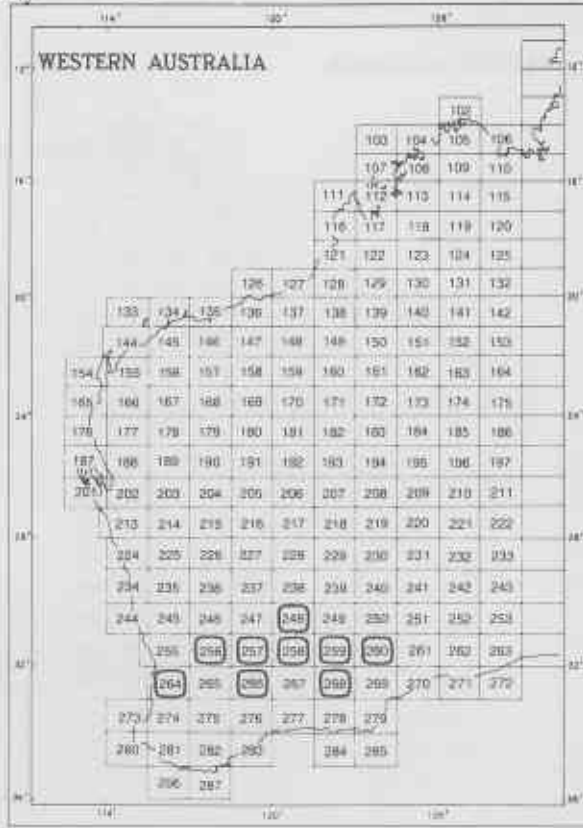
**Haematomma eremareum* R.W.Rogers



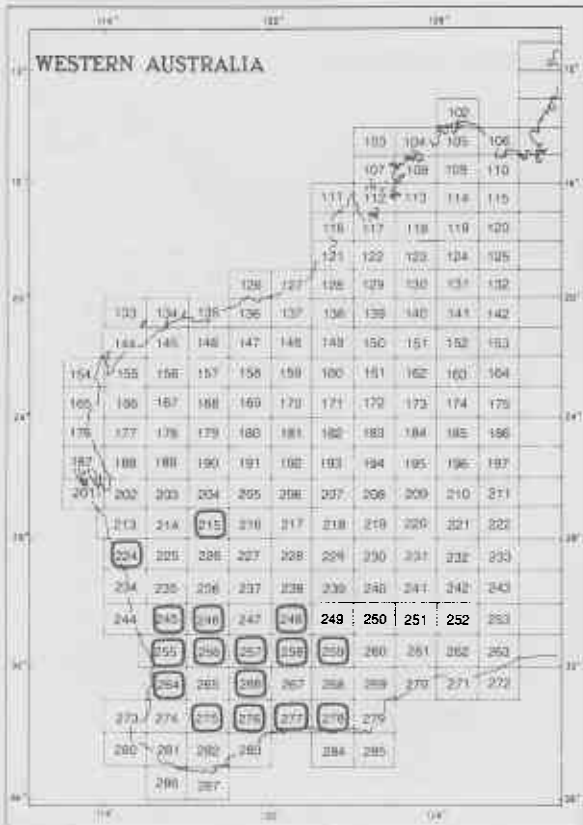
**Haematomma pruinosum* R.W.Rogers



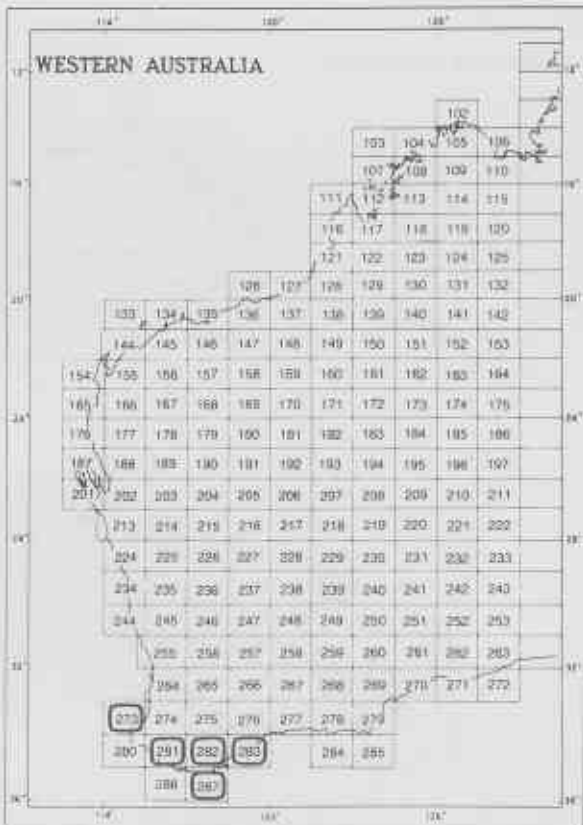
Heppia euploca Vain.



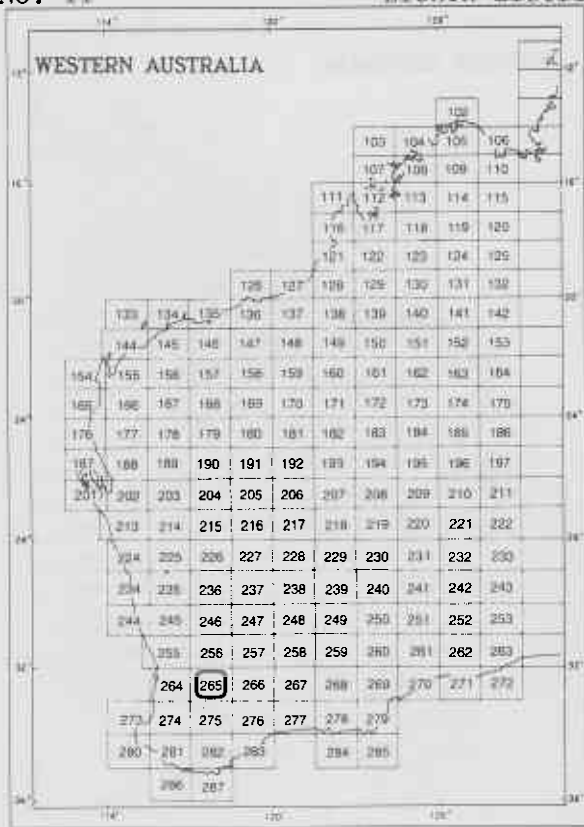
Heterodea beagleholei R.Filson



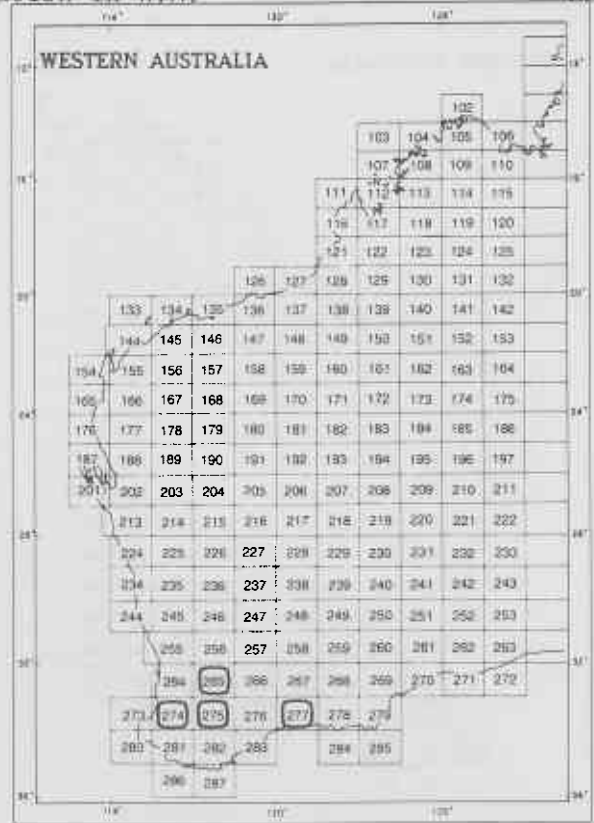
Heterodea muelleri (Hampe) Nyl.



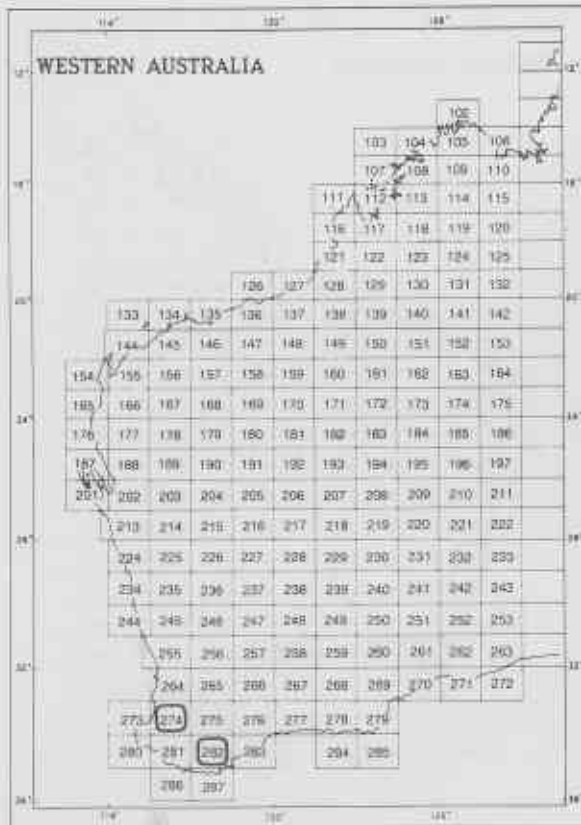
Heterodermia obscurata (Nyl.) Trevis



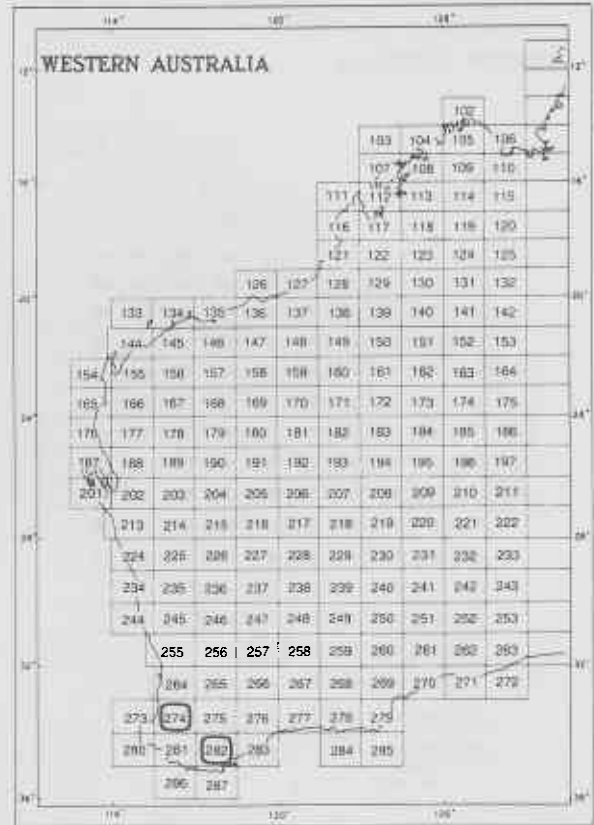
Heterodermia japonica Kurokawa



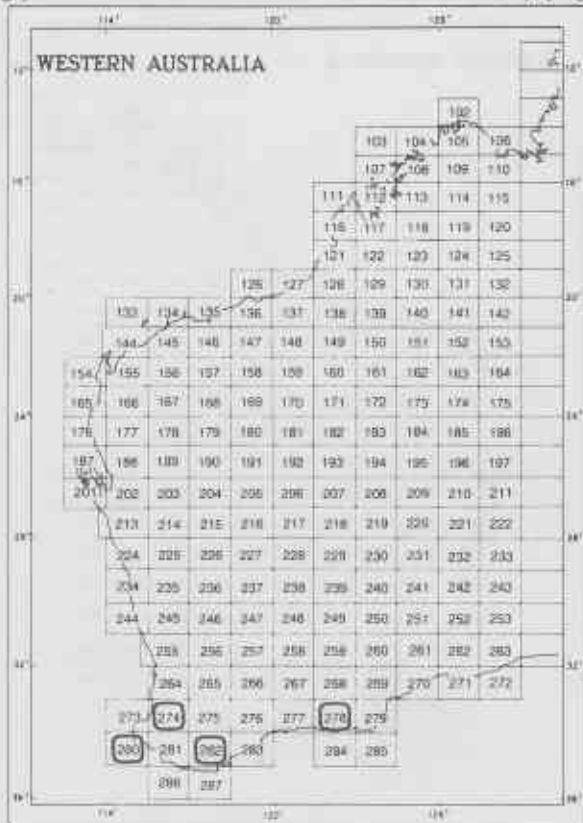
Hypogymnia pulchrilobata (Bitt.) Elix



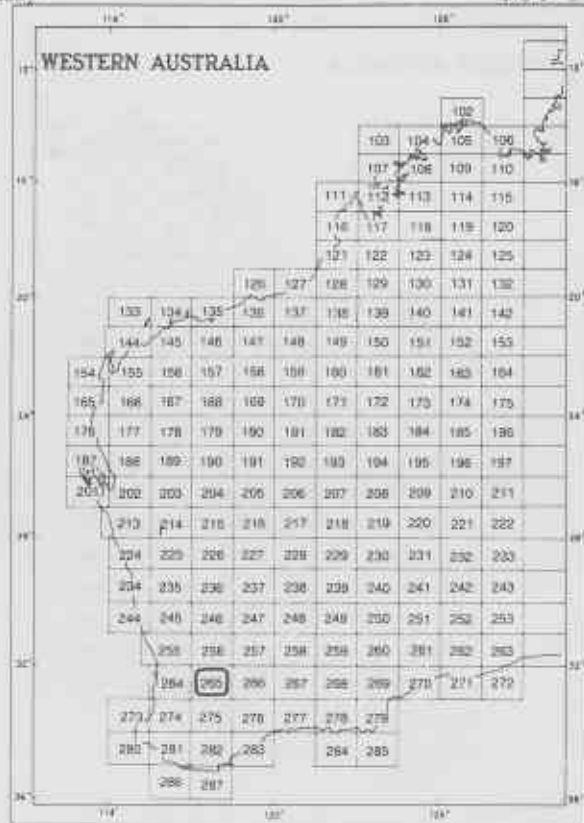
Hypogymnia subphysodes var. *austrerodioides* Elix



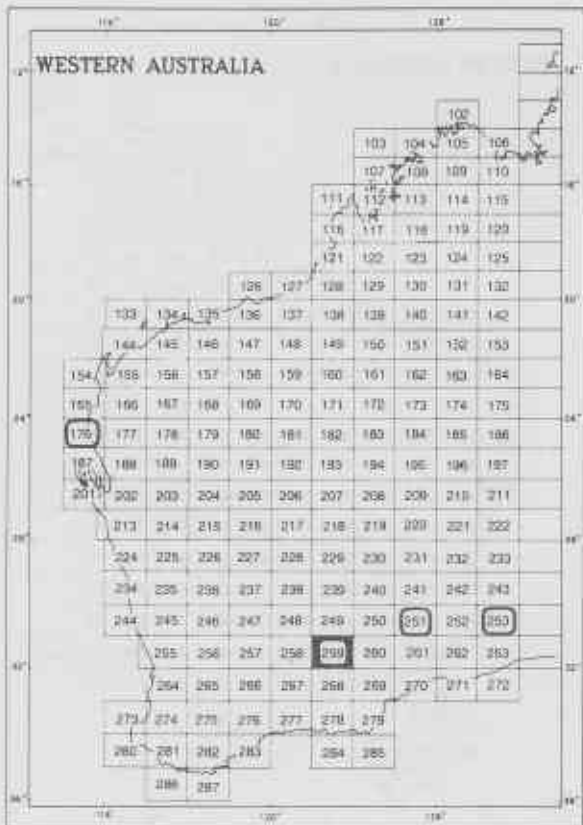
Hypogymnia subphysodes var. *subphysodes* R.Filson



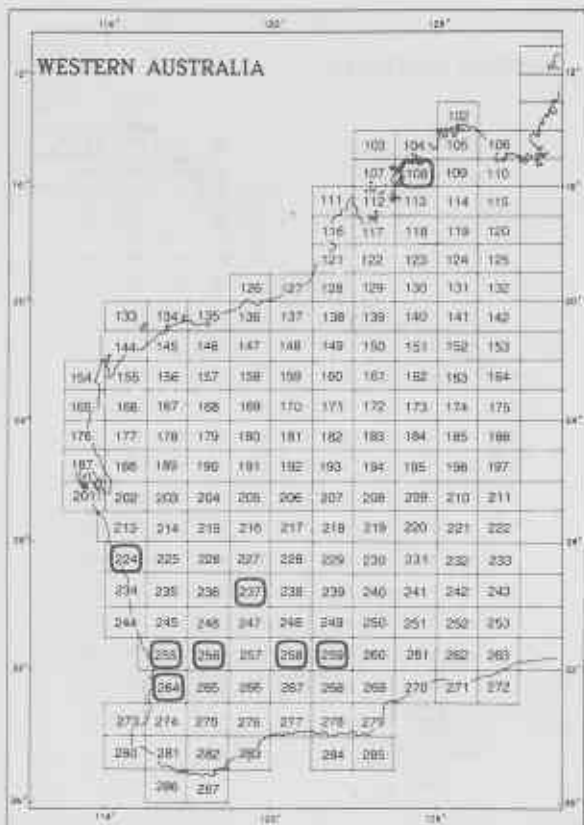
Lecanora atra (Huds.) Ach.



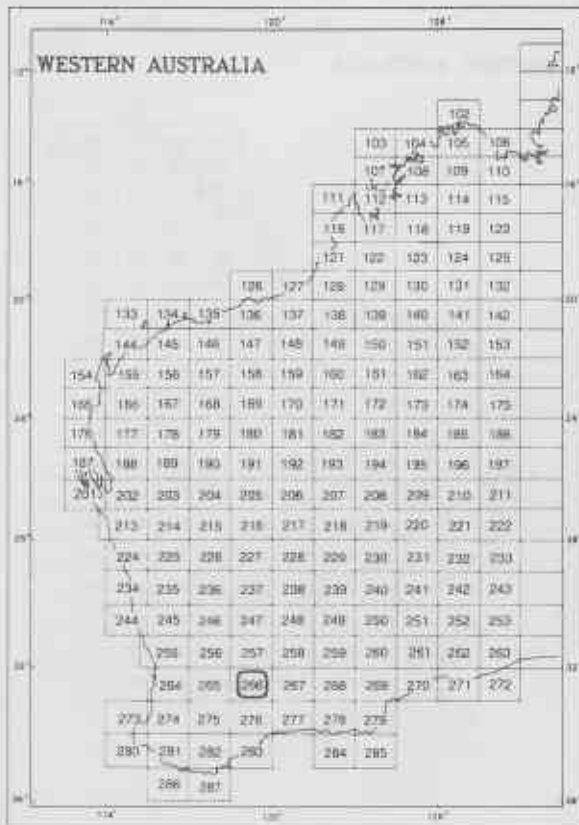
Lecanora cancriformis (Hoffm.) Vain.



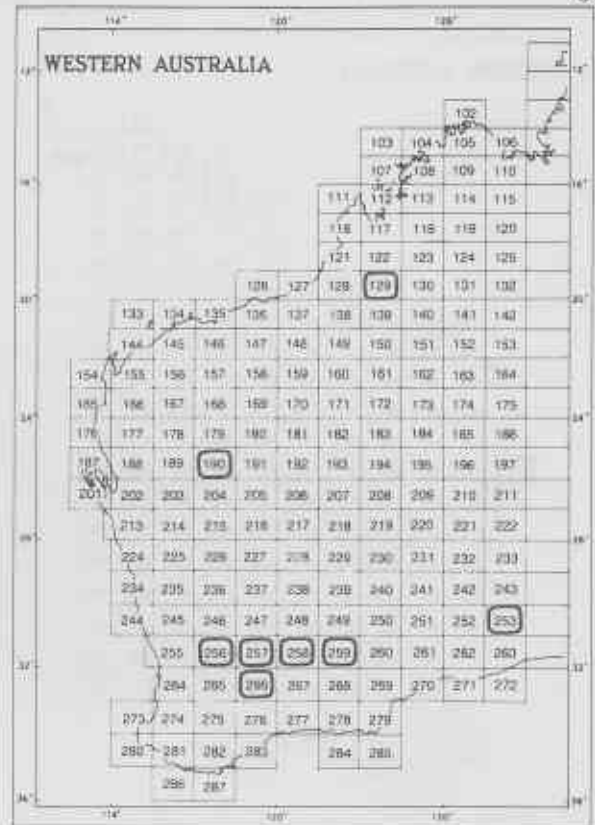
**Lecanora sphaerospora* Muell. Arg.



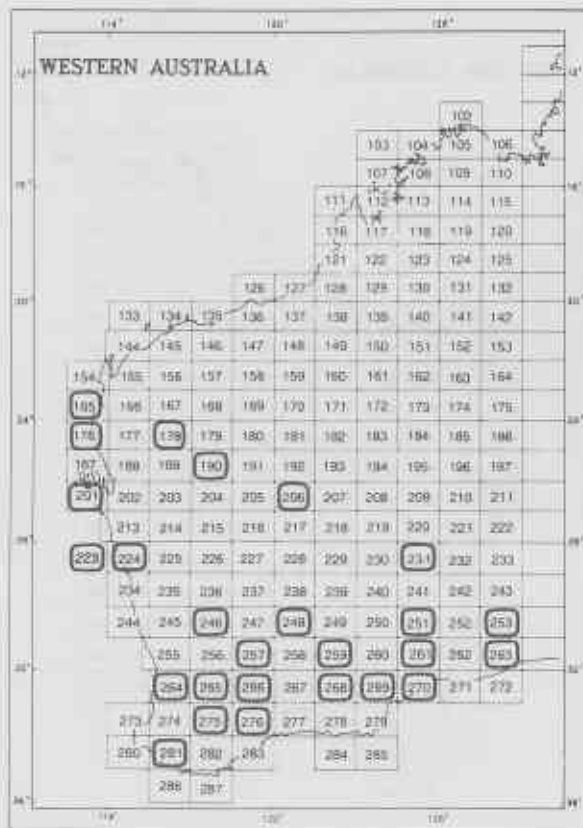
Lecidea contigua (Hoffm.) Fr.



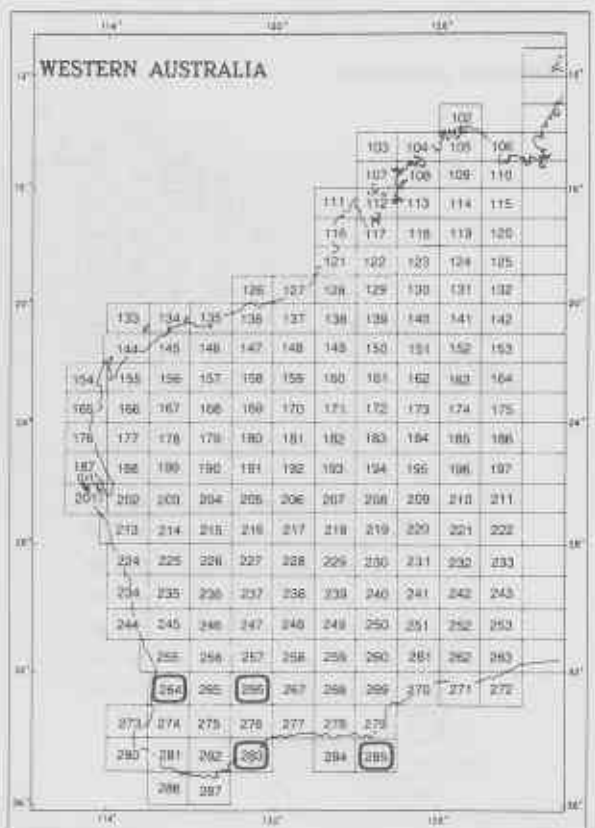
Lecidea croactata (Sm.) Nyl.



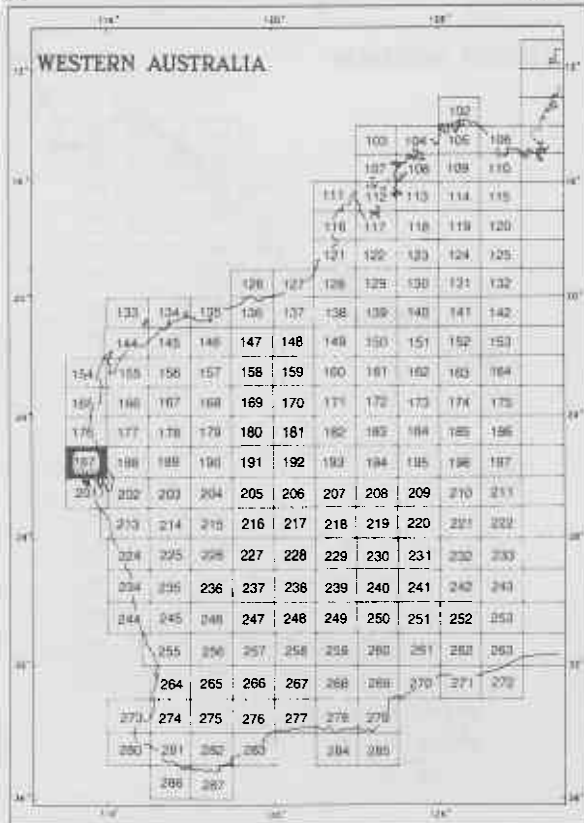
**Lecidea crystallifera* Tayl.



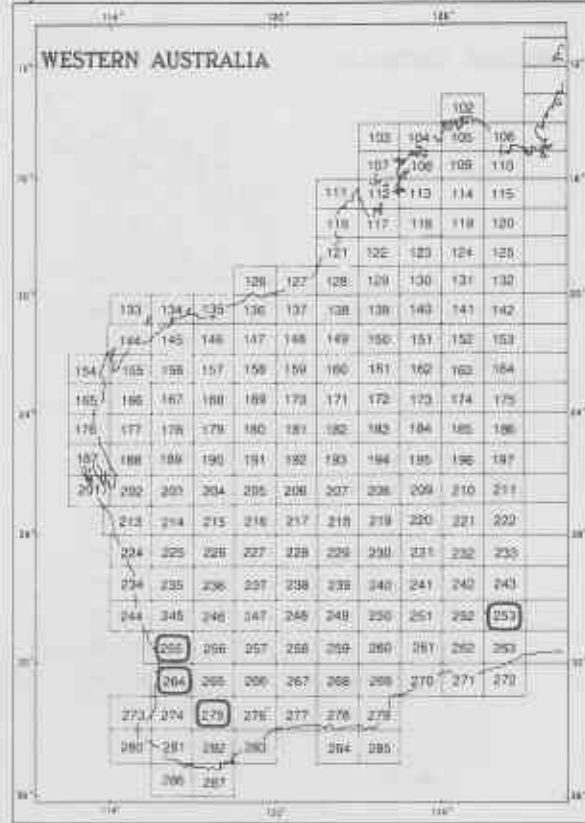
Lecidea decipiens (Hoffm.) Ach.



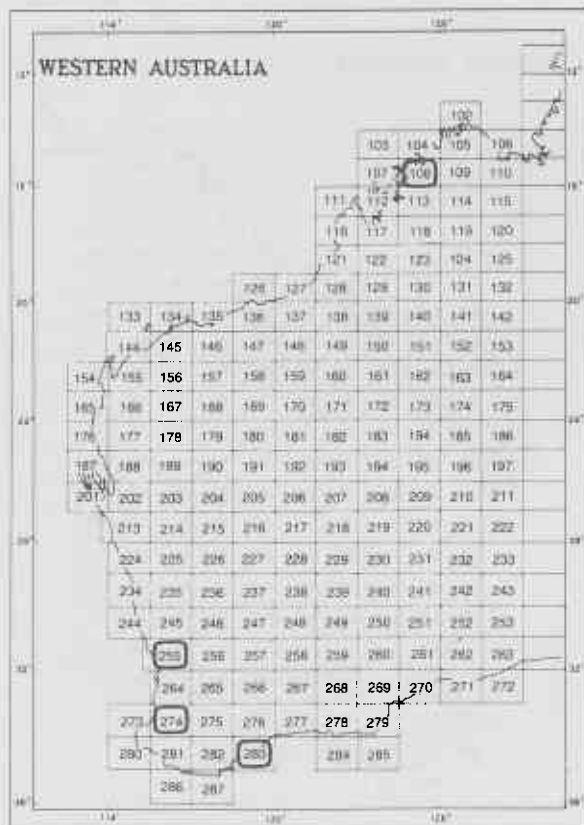
Lecidea laeta Stirt.



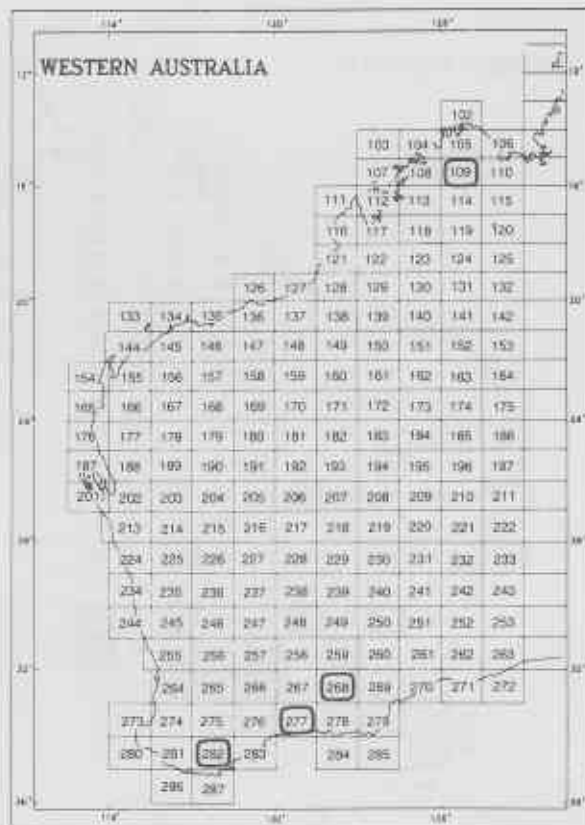
Lecidea ochroleuca Pers. in Gaudichaud



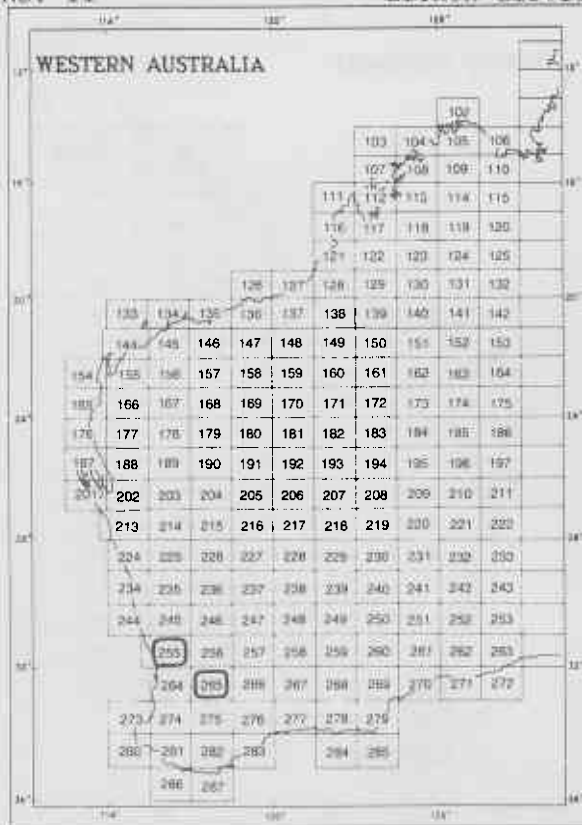
Lecidea planata Muell. Arg.



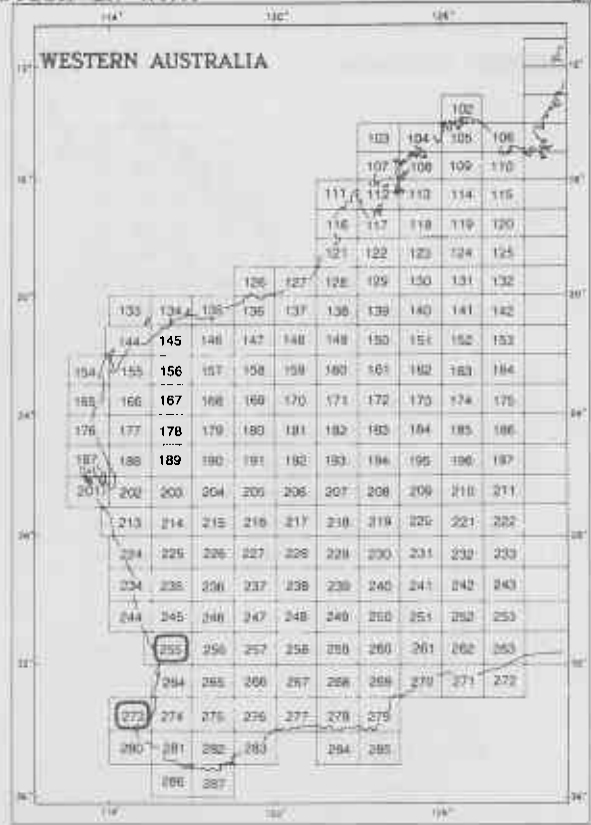
Lepraria candelaris (L.) Fr.



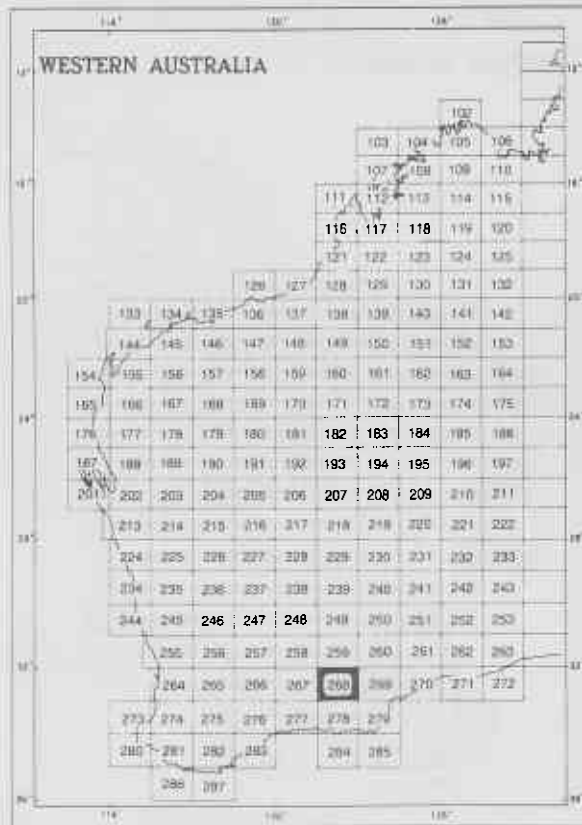
Lepraria membranaceae (Dicks.) Lett.



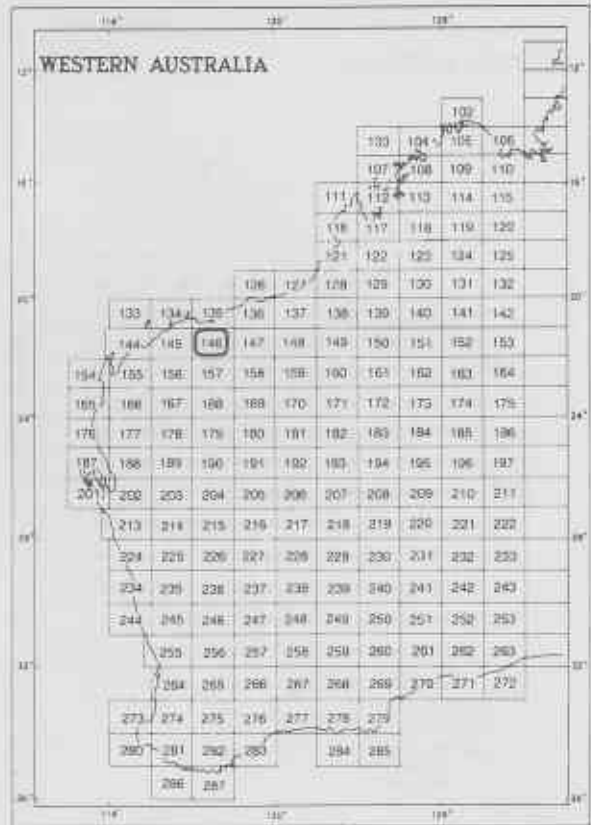
Leprocaulon microscopicum (Vill.)
Gams ex Hawksw.



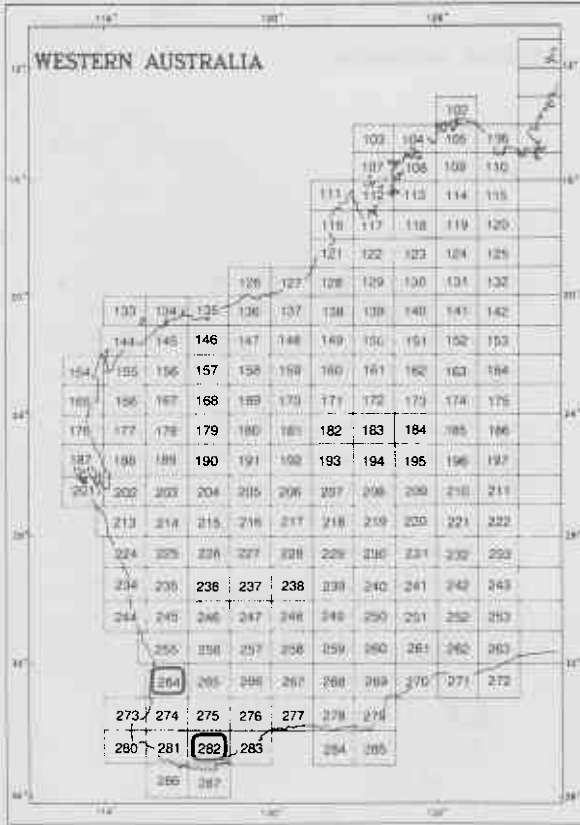
Leptogium phyllocarpum (Pers.) Mont.



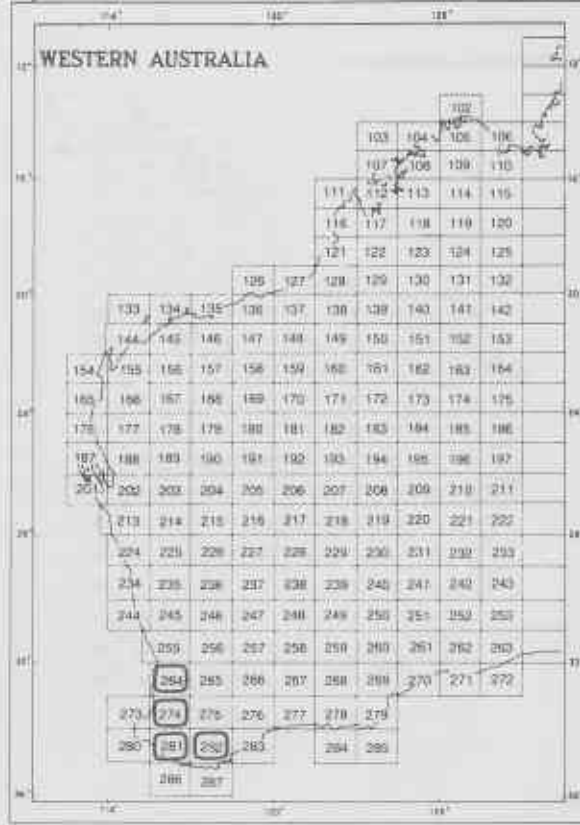
**Lichina minutissima* A.Henss.



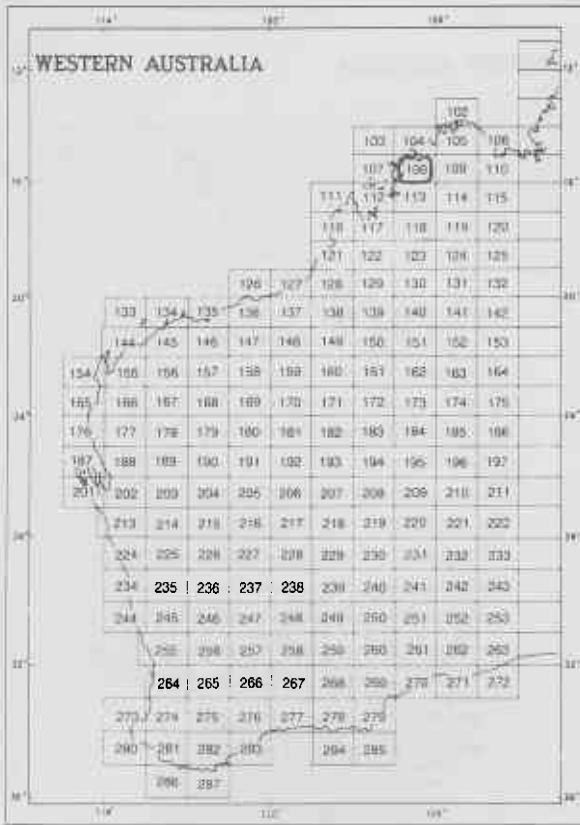
Lichenothelia scopularia (Ny1.)
D.Hawksw.



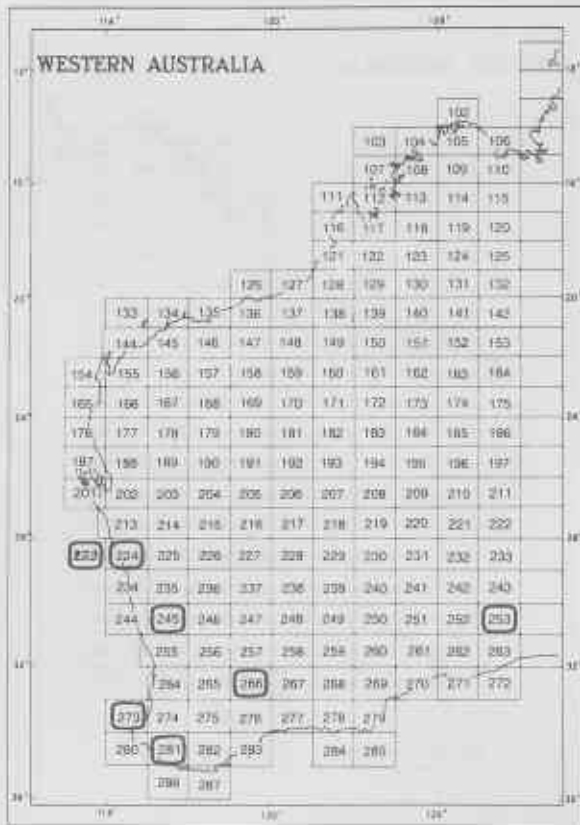
Menegazzia caesiopruinosa P. James



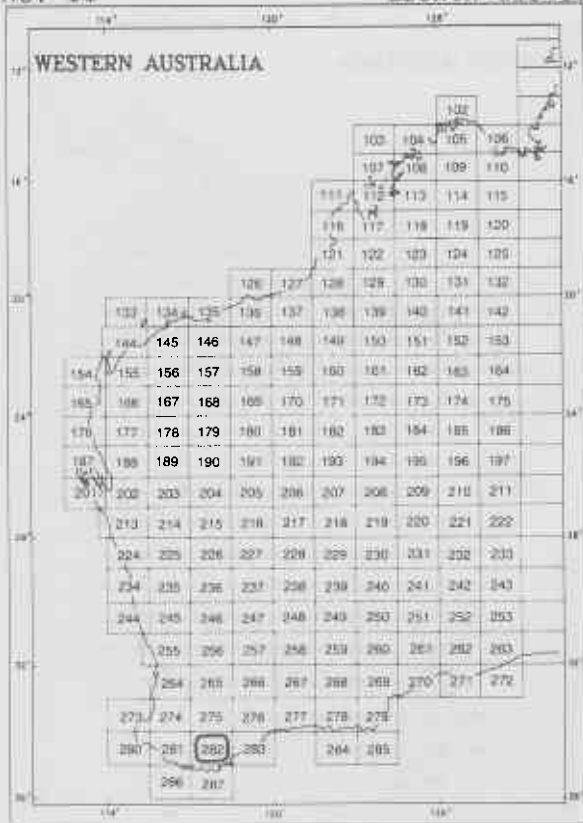
Menegazzia platytrema (Muell. Arg.) Sant.



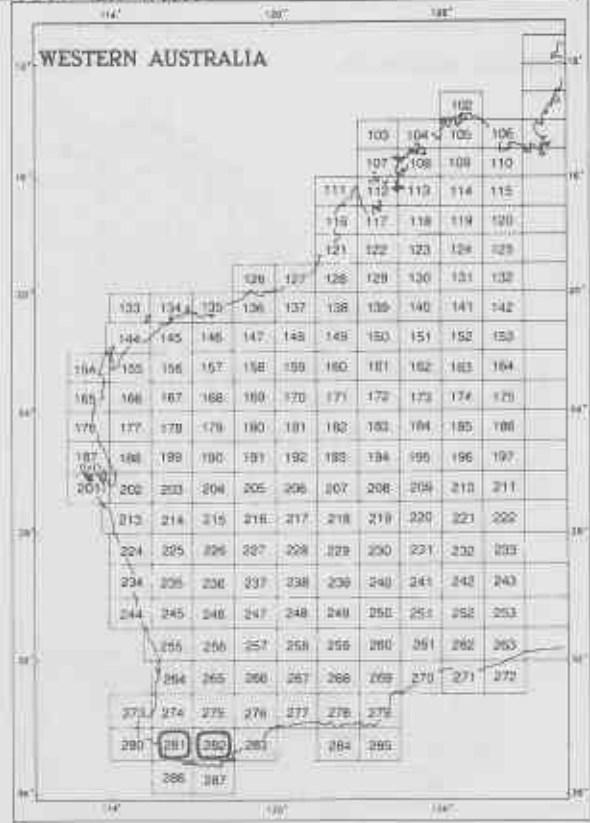
Microthelia micula (Flot.) Koerb.



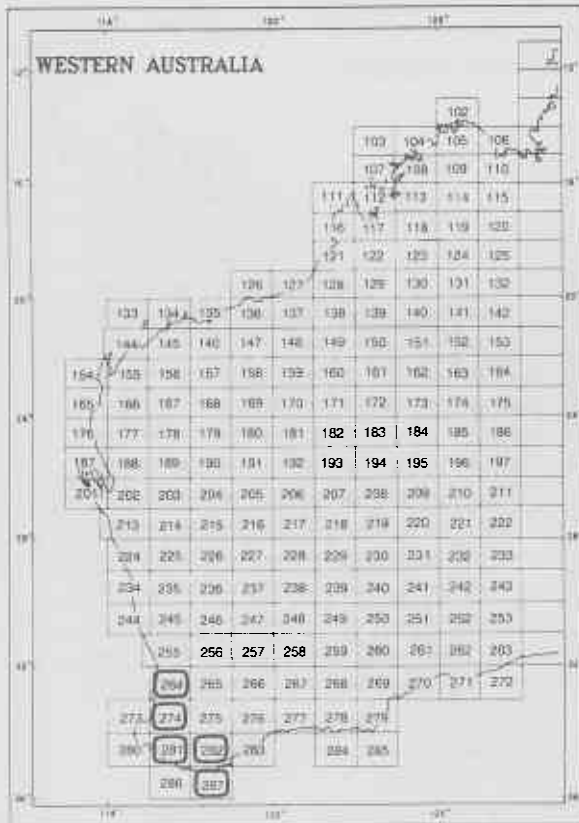
Ochrolechia subpallascens Verseghy



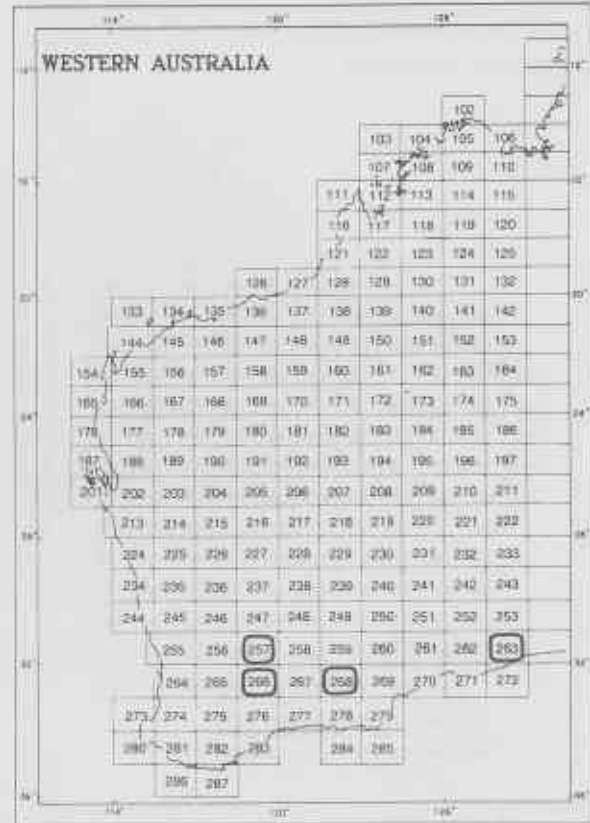
Pannaria pityrea G.Nils.



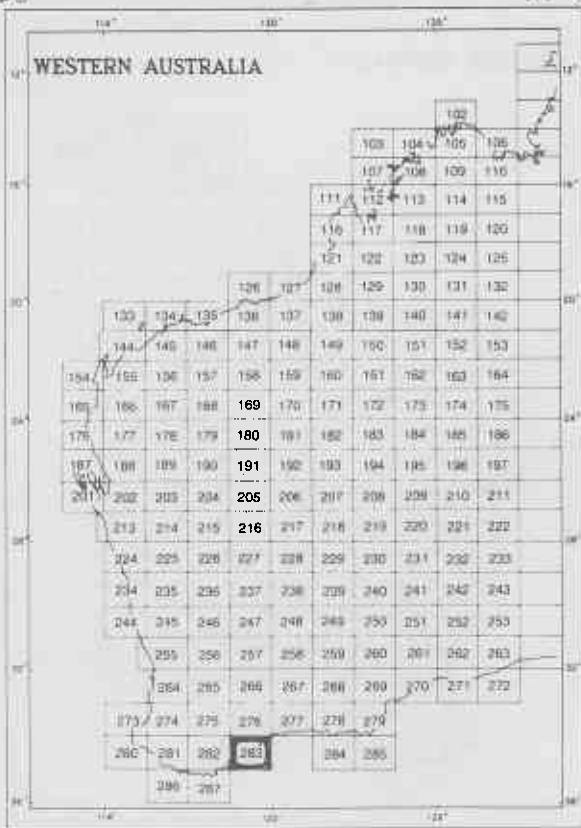
Pannaria rubiginosa (Thunb. ex Ach.)
Del.



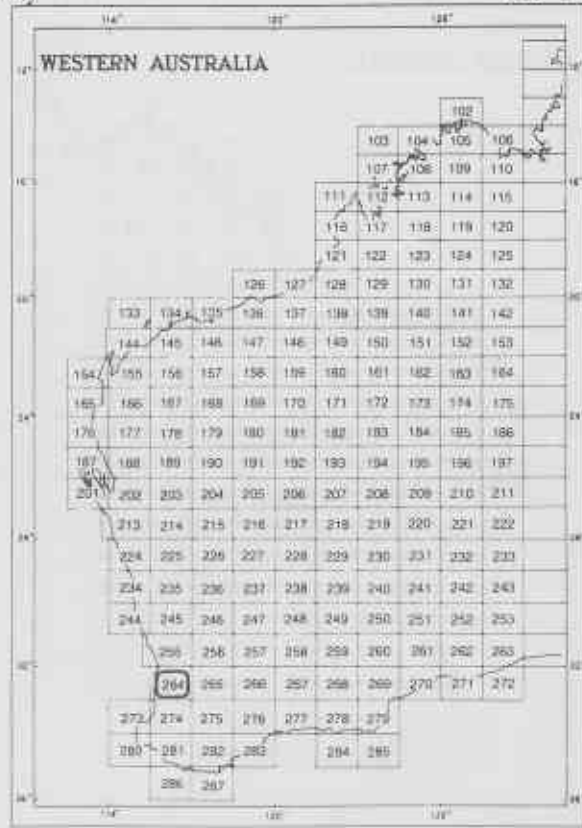
Pannoparmelia wilsonii (Räs.) D.Gall.



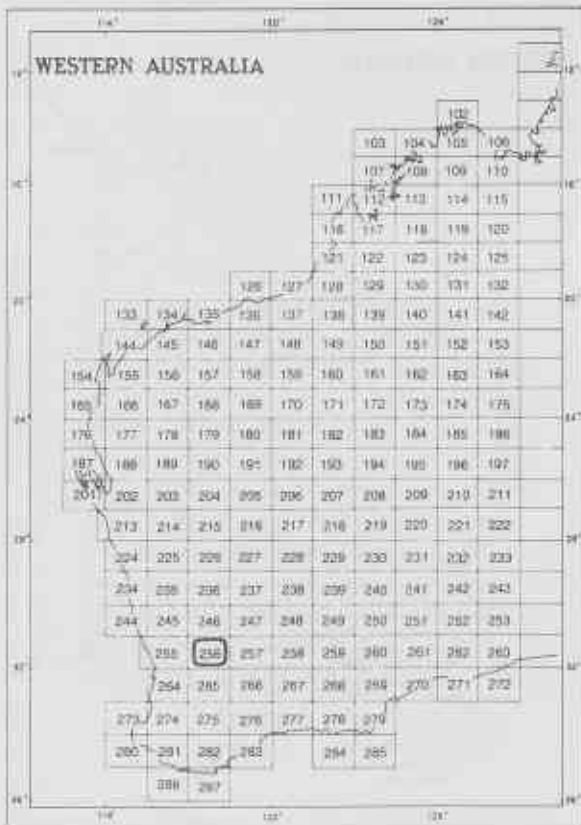
Parmelia amphixantha Muell.Arg.



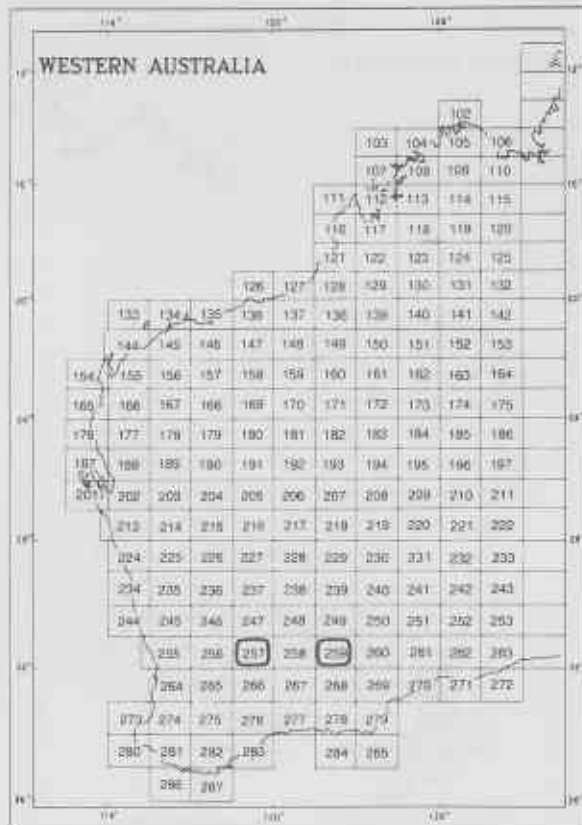
**Parmelia antleriformis* Elix



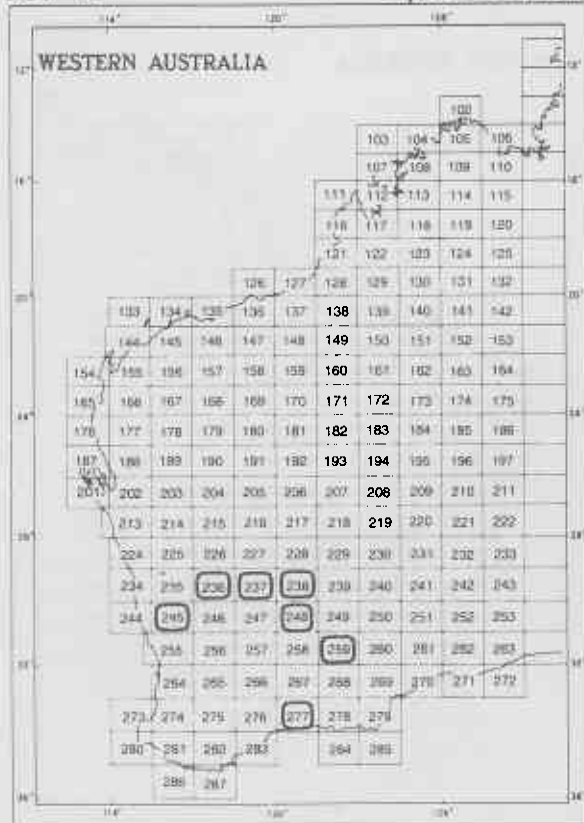
Parmelia australasica (D.Gall.)
R.Filson



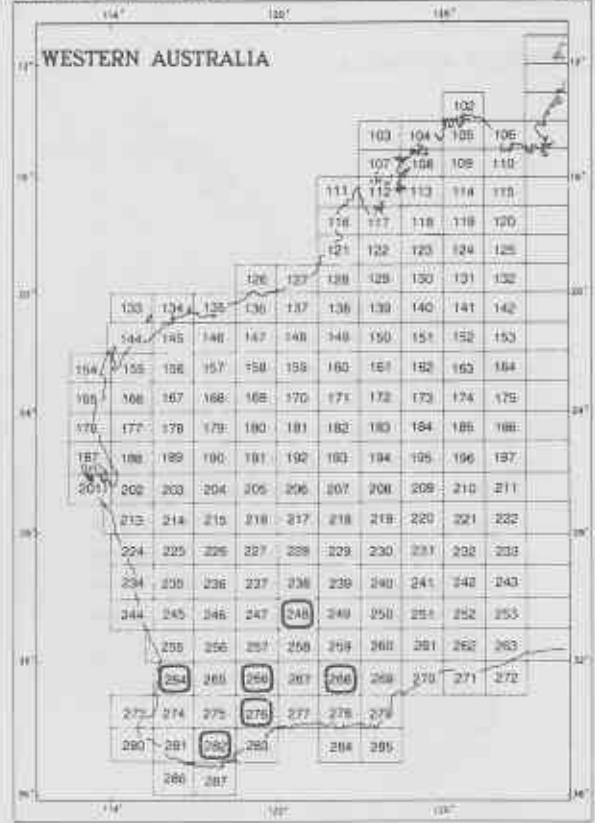
Parmelia australiensis Cromb.



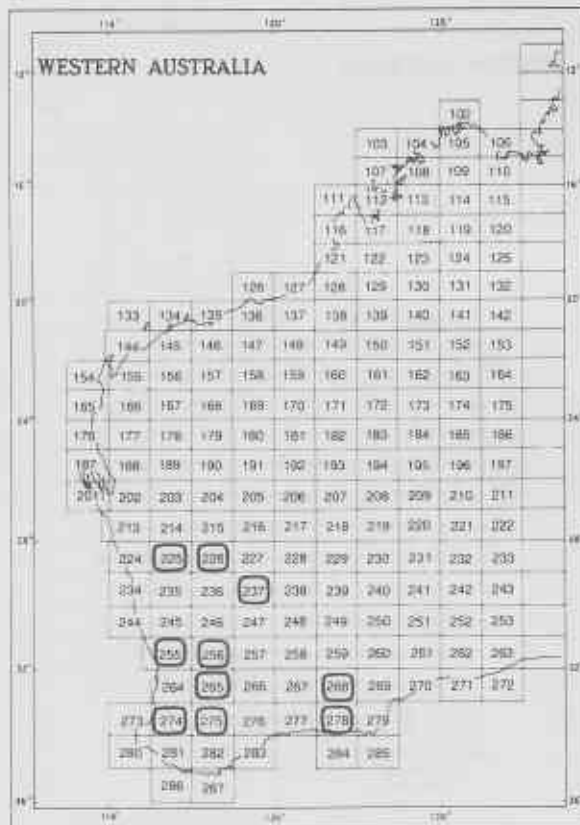
Parmelia bellatula Kurokawa &
R.Filson



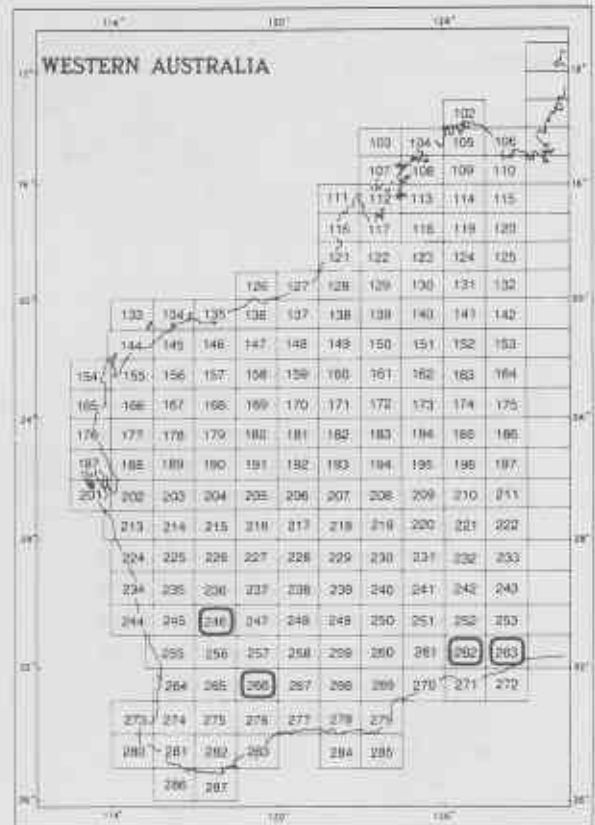
Parmelia callifolia Kurokawa



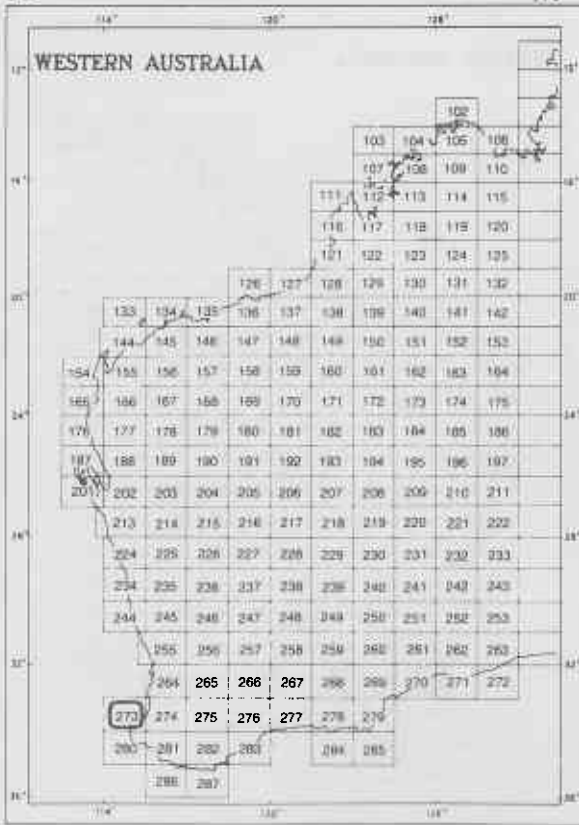
Parmelia cheelii Gye.



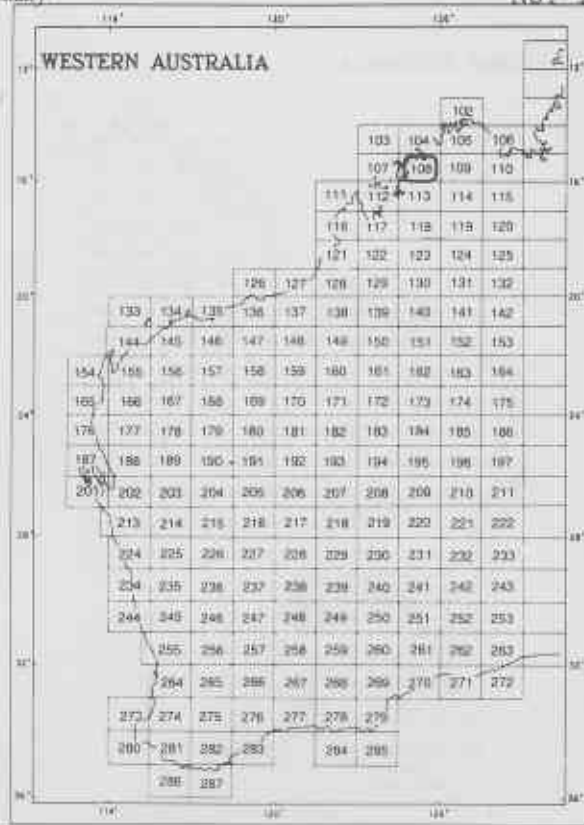
Parmelia conspersa (Ach.) Ach.



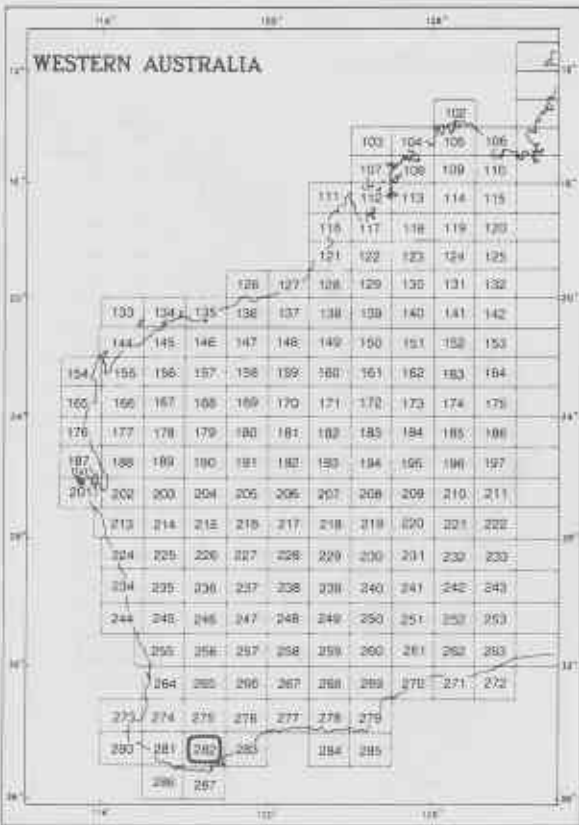
Parmelia convoluta Kremph.



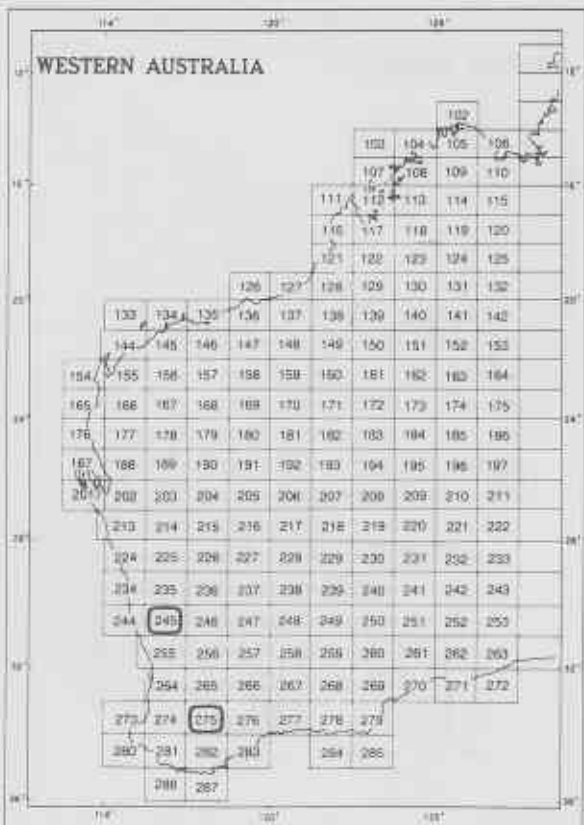
Parmelia cooperi Stein. & Zahlbr.



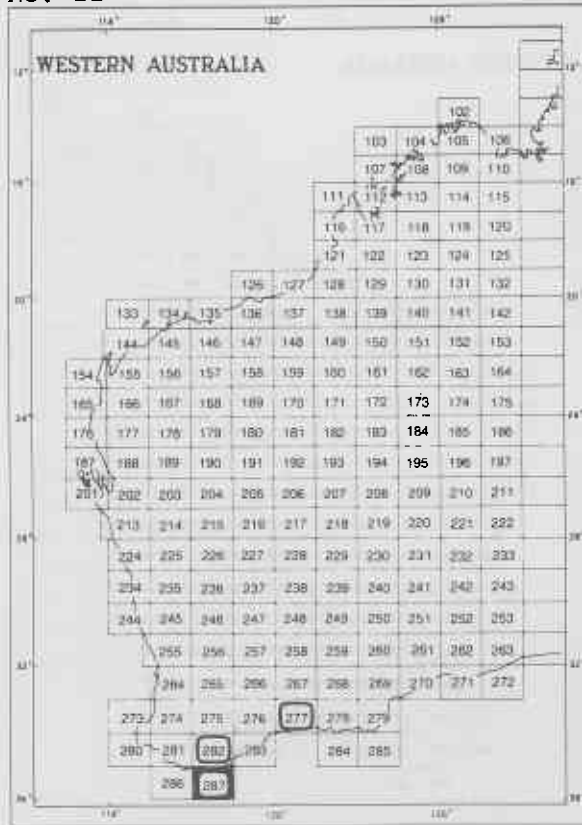
Parmelia dilatata Vain.



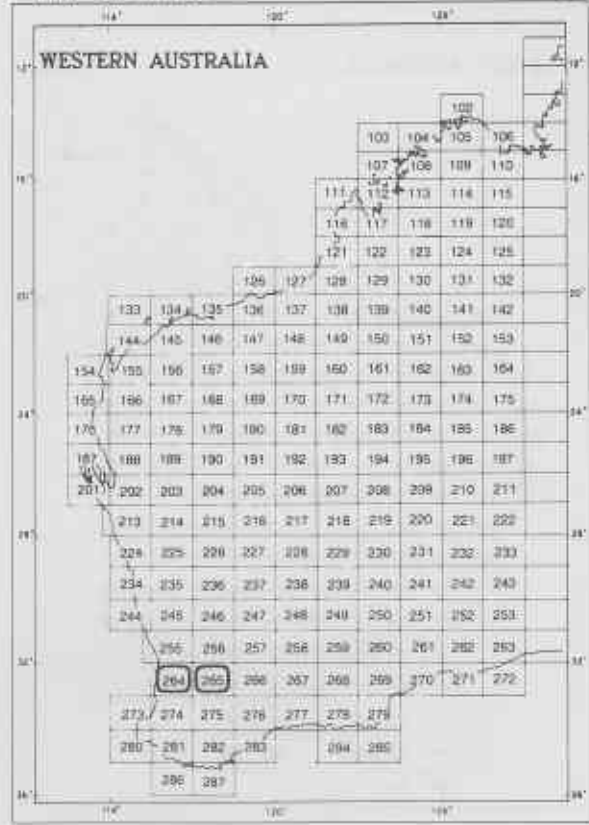
**Parmelia imitatrix* Tayl.



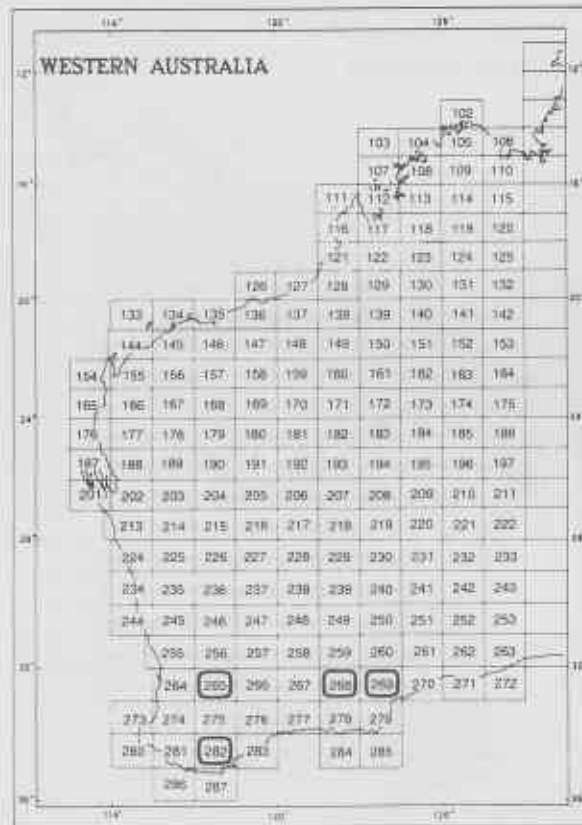
Parmelia incantata Essl.



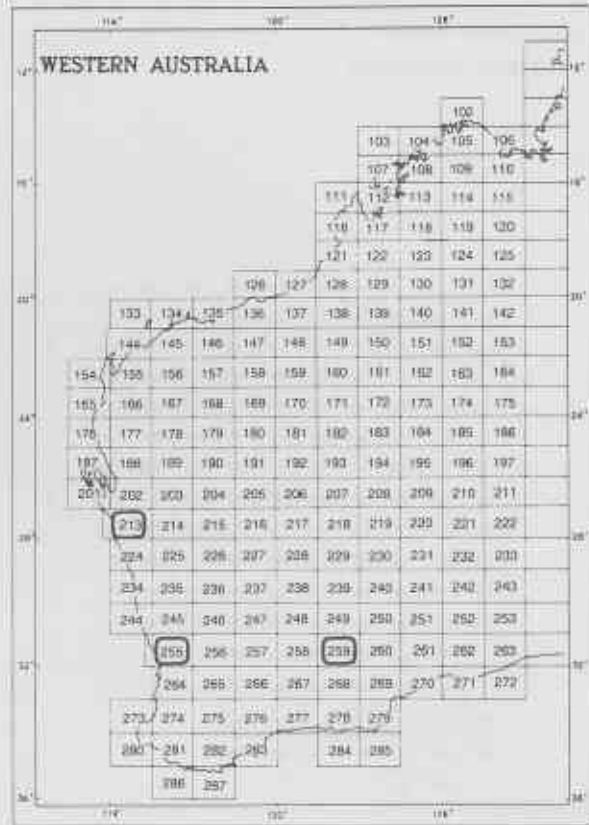
Parmelia harrisi Kurokawa



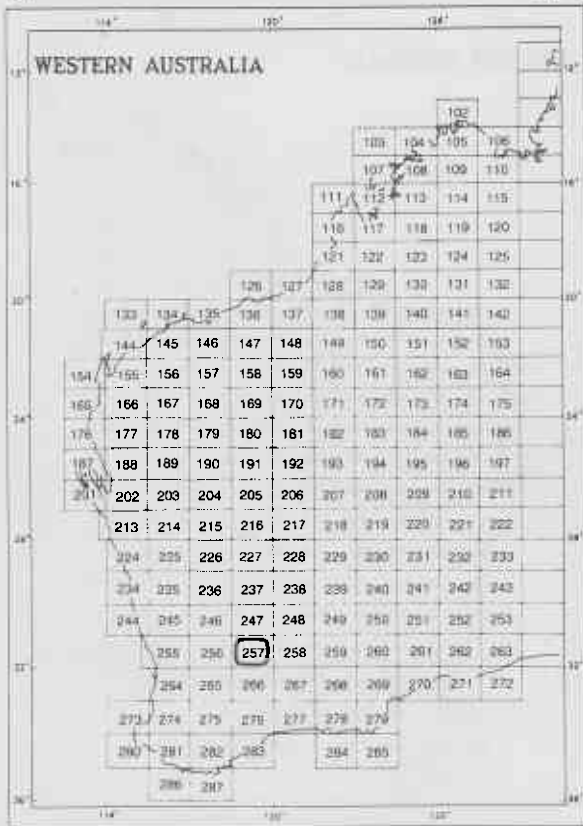
Parmelia hypoprotocetrarica Kurokawa & Elix



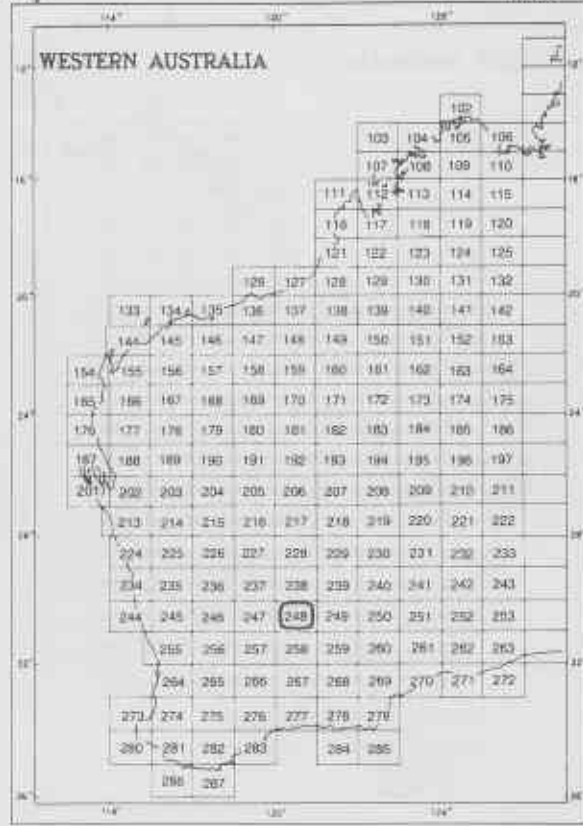
**Parmelia imitatrix* Tayl.



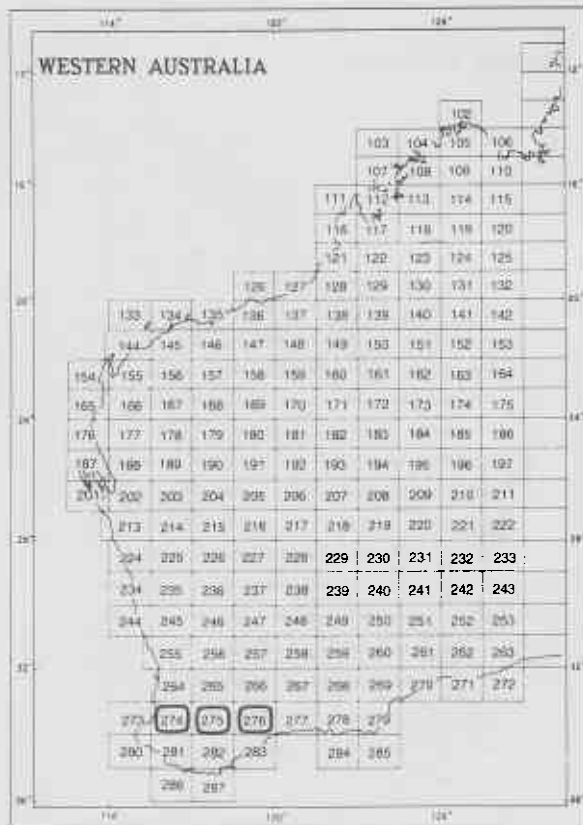
Parmelia incantata Essl.



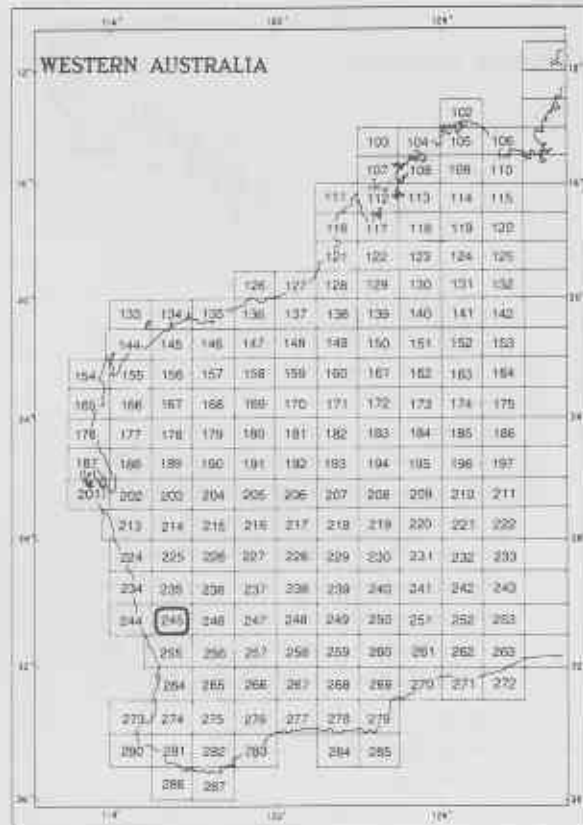
Parmelia incrustata Kurokawa & R.Filson



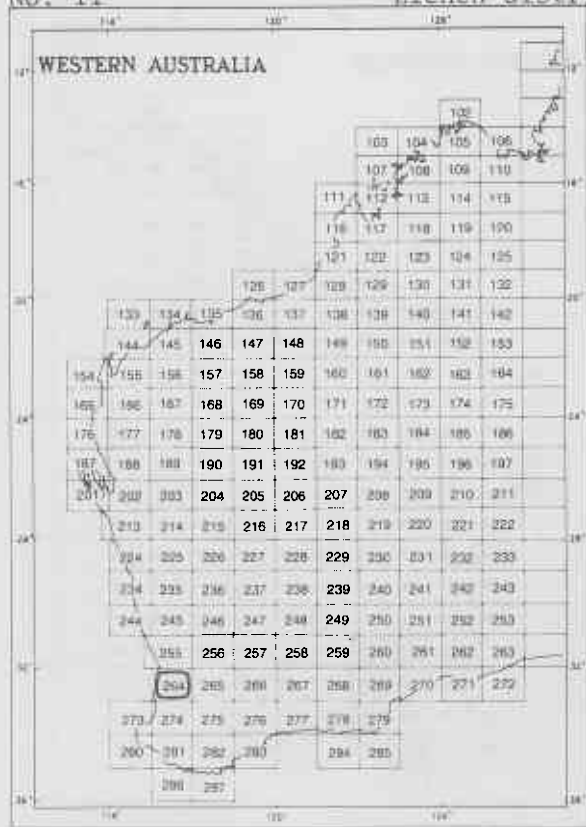
Parmelia metaclystoides Kurokawa & R.Filson



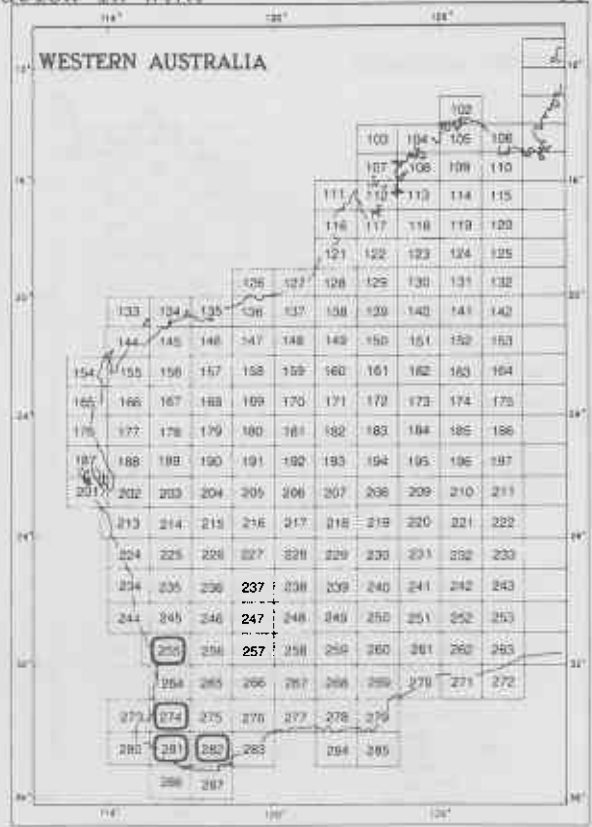
Parmelia mexicana Gye1.



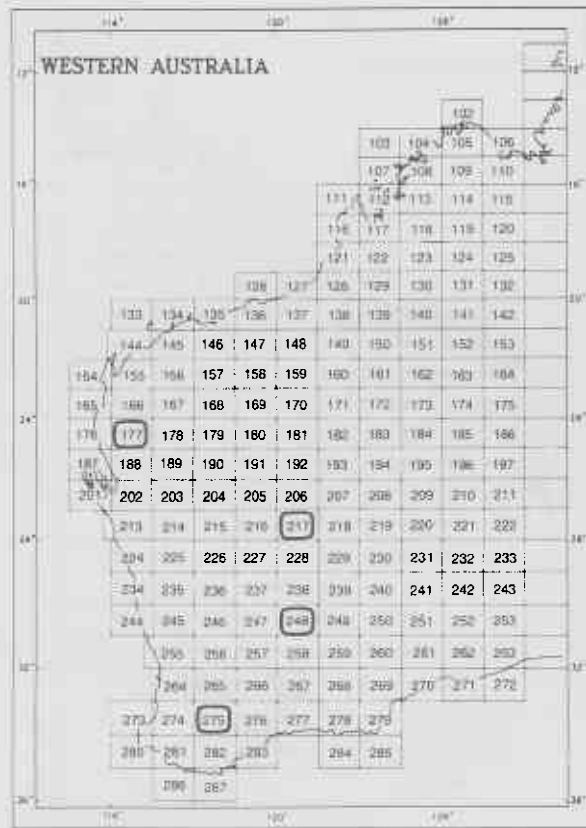
Parmelia nebulosa Kurokawa & R.Filson



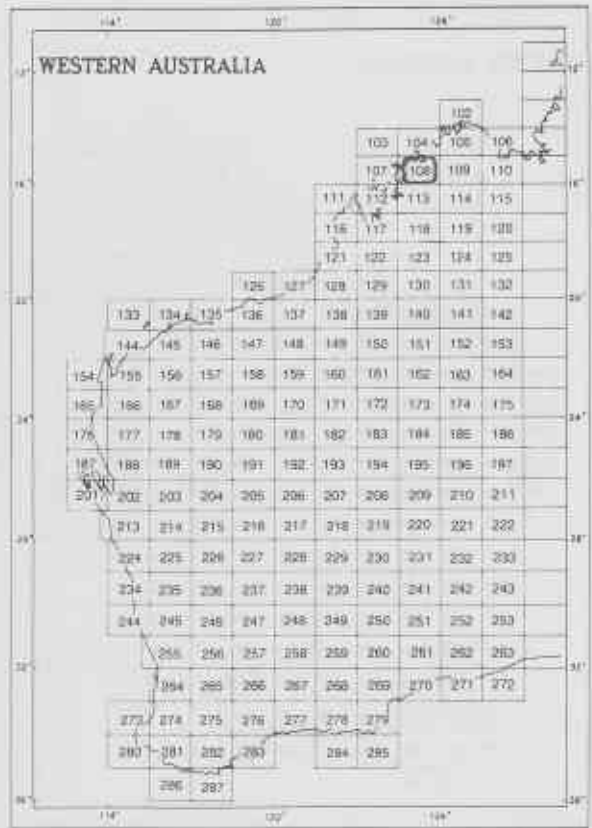
Parmelia notata Kurokawa



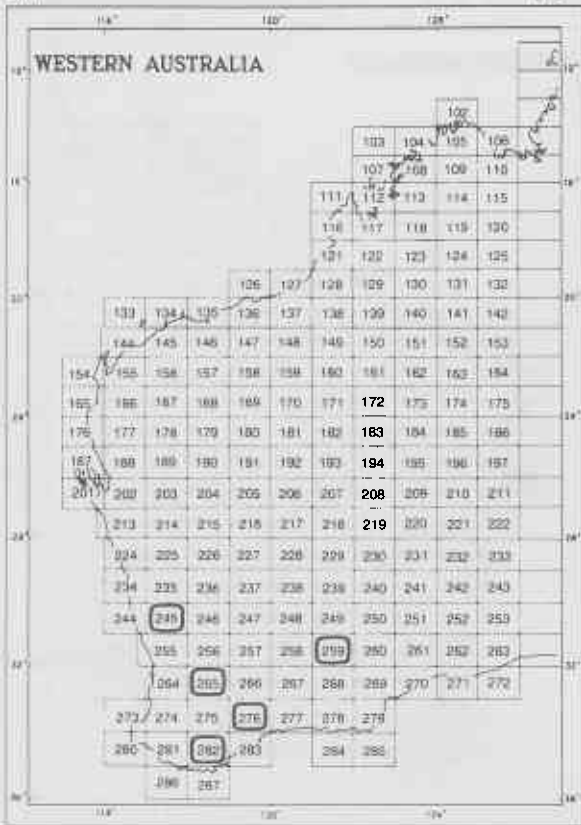
Parmelia perlata (Huds.) Ach.



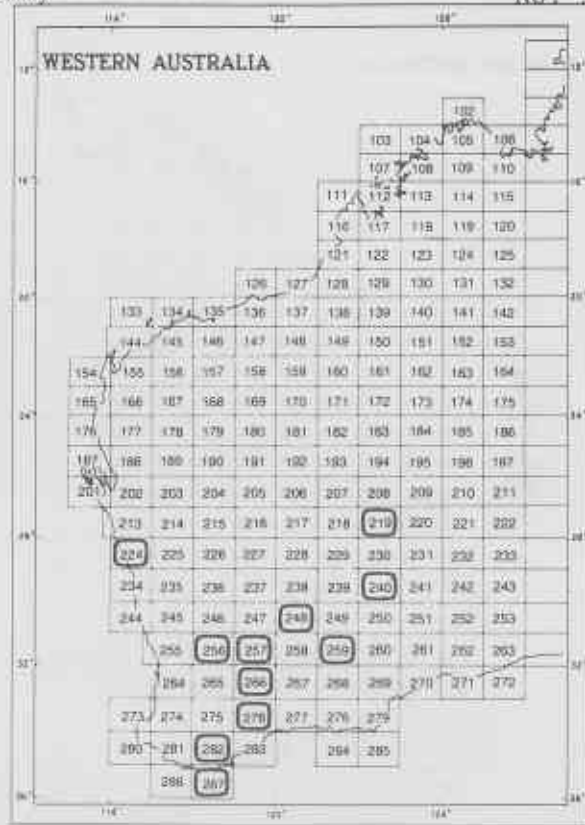
Parmelia plittii Gye1.



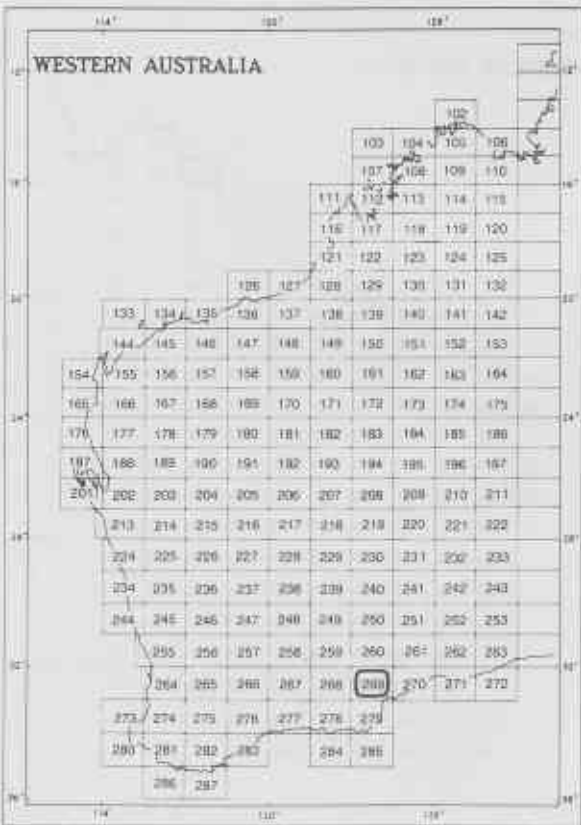
Parmelia praesorediosa Nyl.



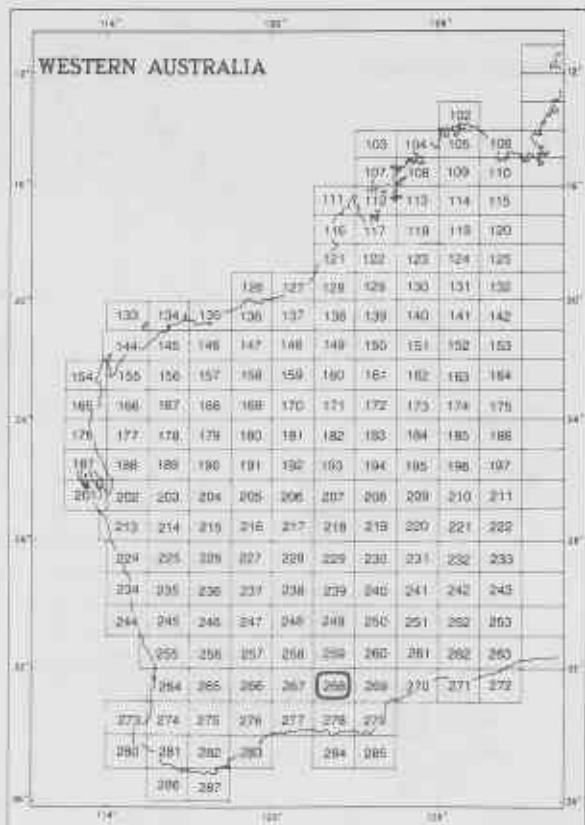
Parmelia pruinata Muell.Arg.



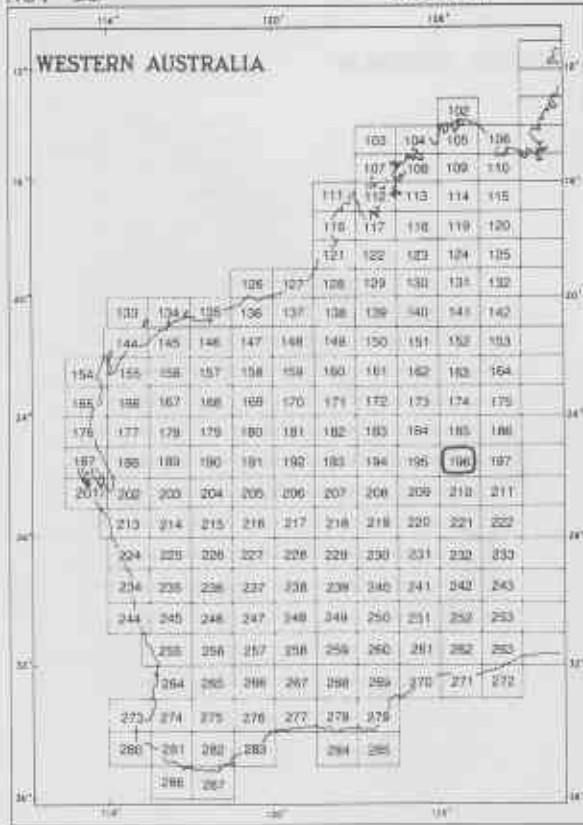
Parmelia pulla (Schreb.) Ach.



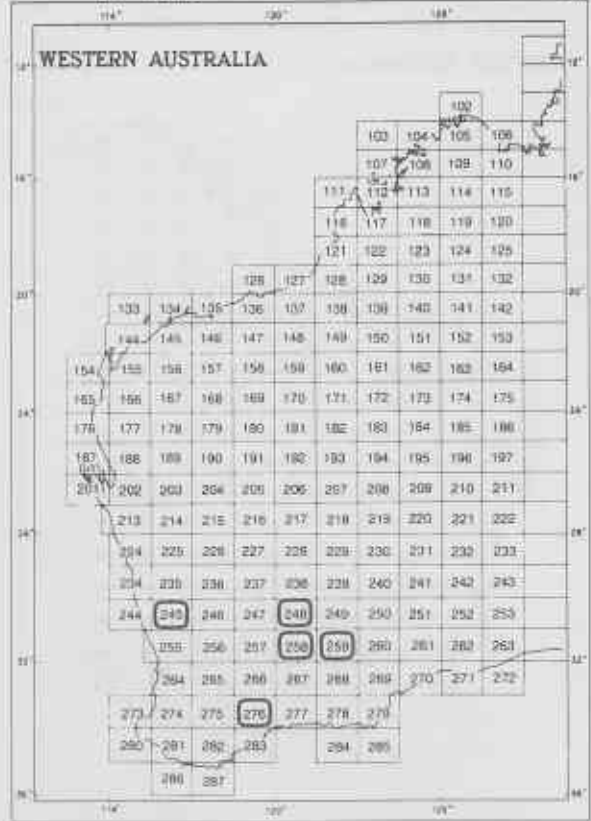
Parmelia pumila Kurokawa & R.Filson



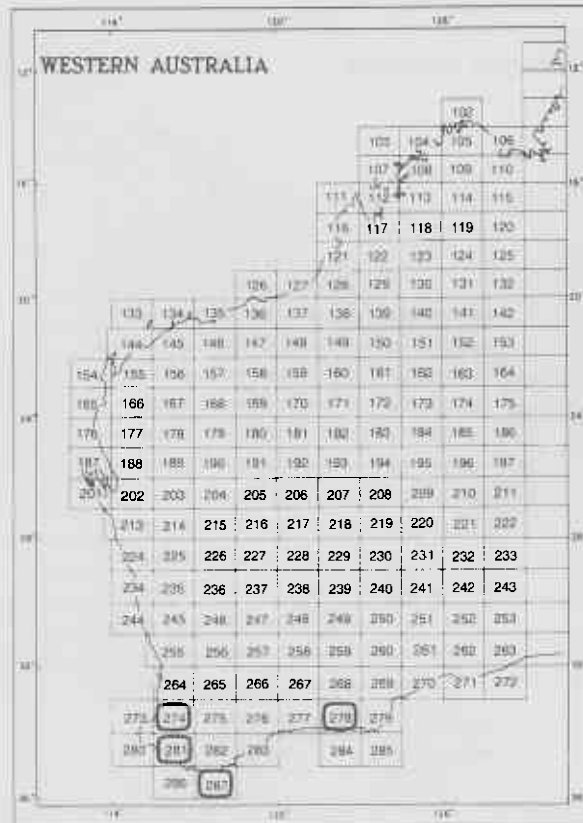
Parmelia quercina (Willd.) Vain.



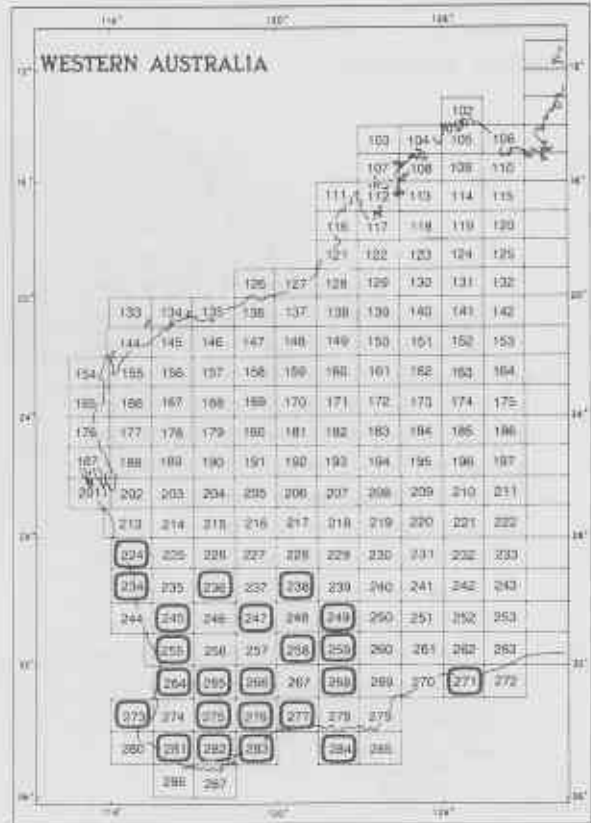
Parmelia refringens Kurokawa & R.Filson



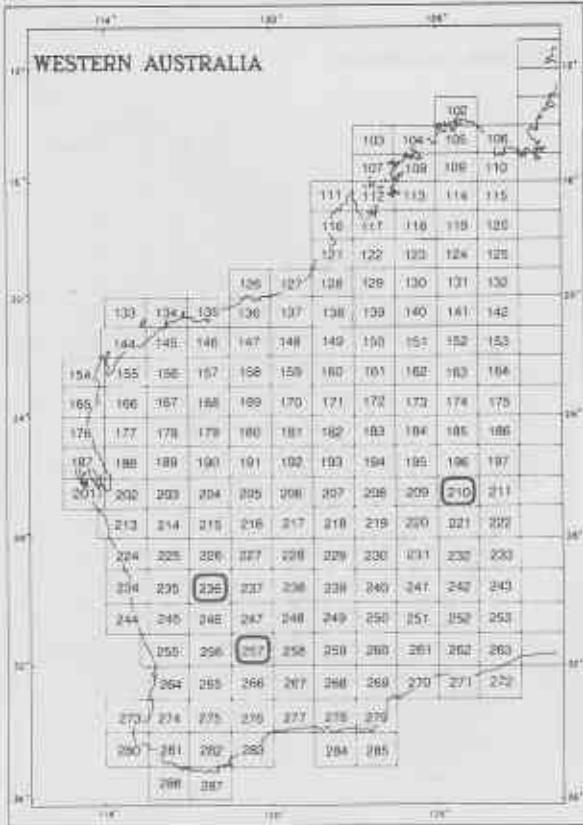
Parmelia reptans Kurokawa



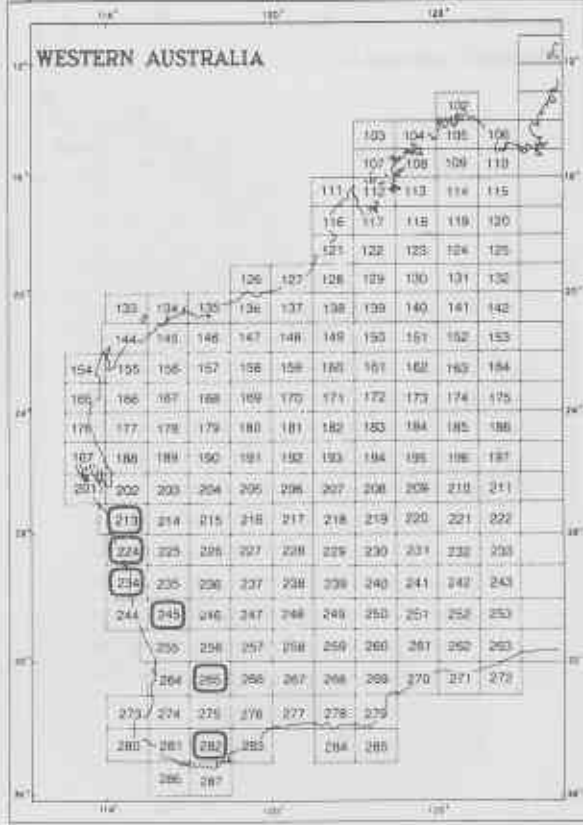
Parmelia reticulata Tayl. apud MacKay



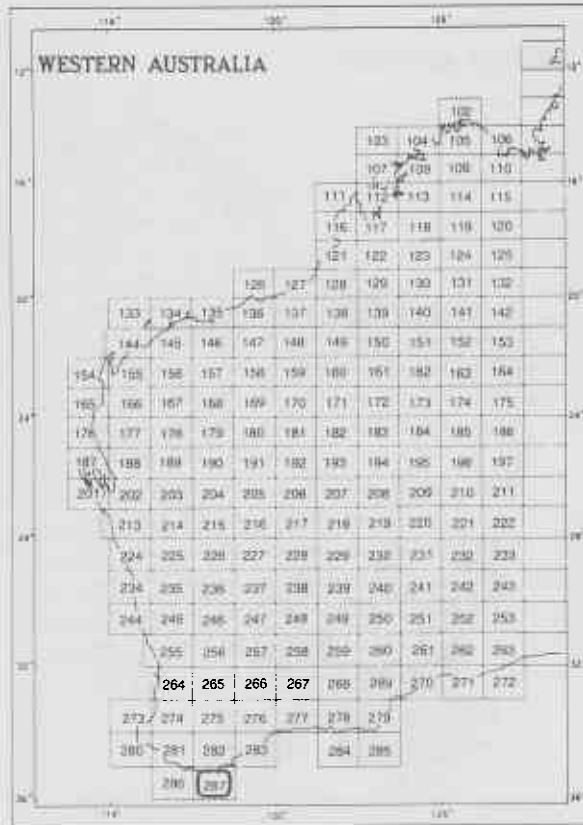
Parmelia rutidota Hook.f. & Tayl.



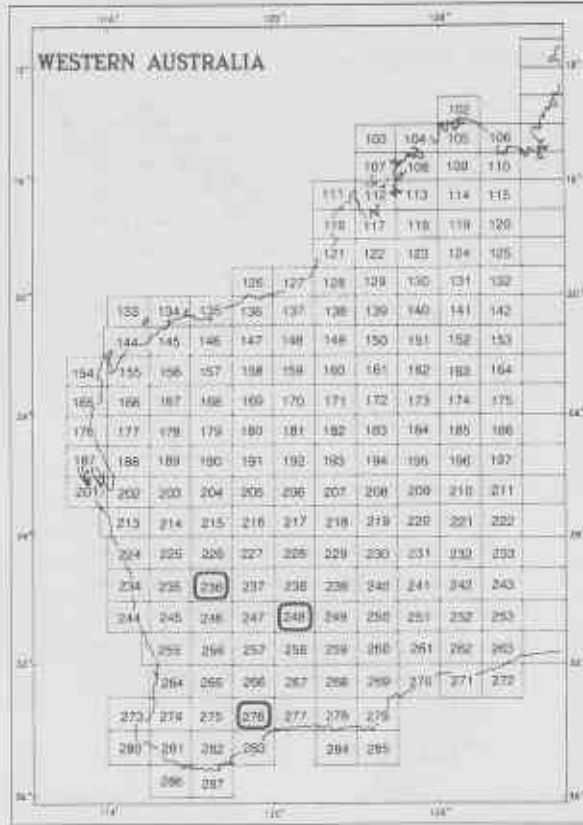
**Parmelia scabrosa* Tayl.



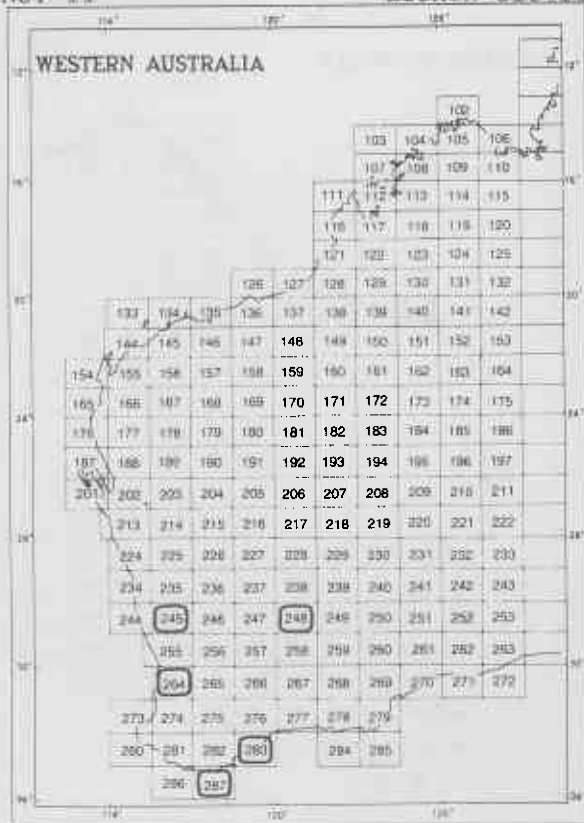
Parmelia subalbicans Stirt.



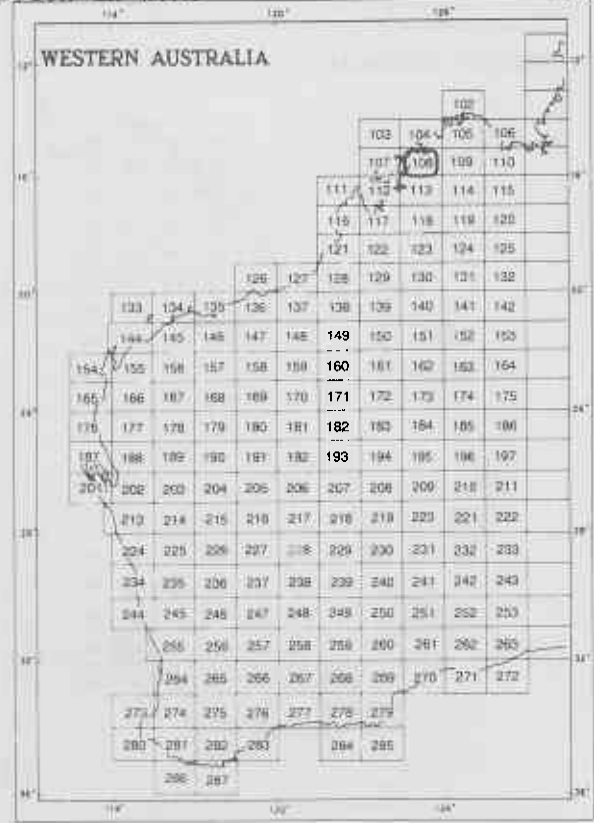
Parmelia subsumpta Nyl.



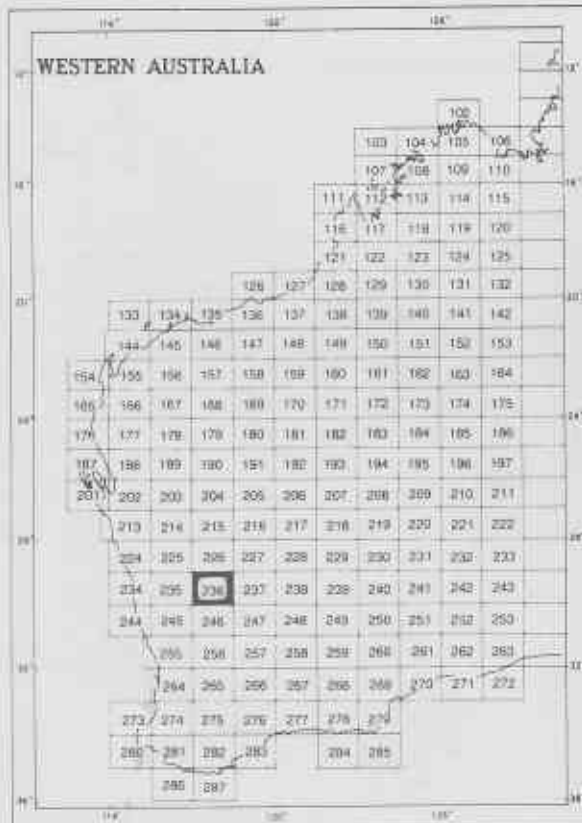
Parmelia terrestris Kurokawa & R. Filson



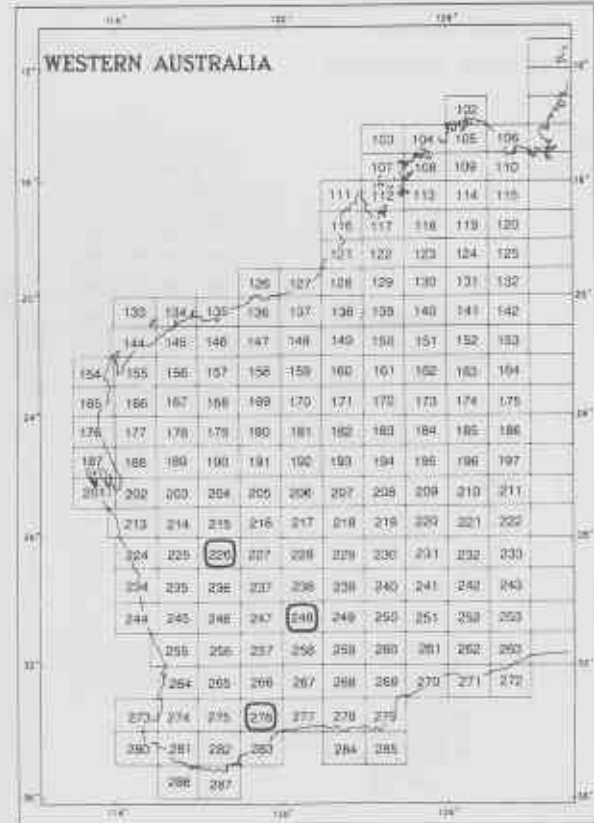
Parmelia tinctorum Mah. et Gill.



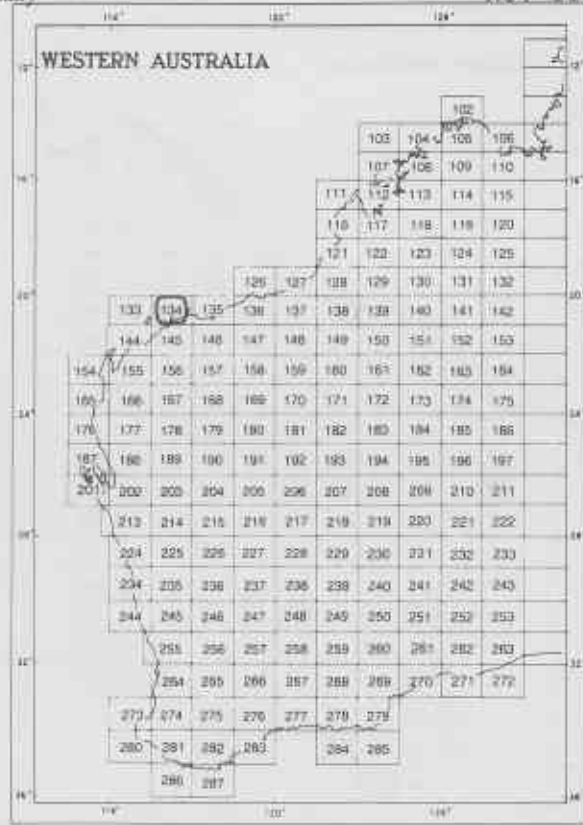
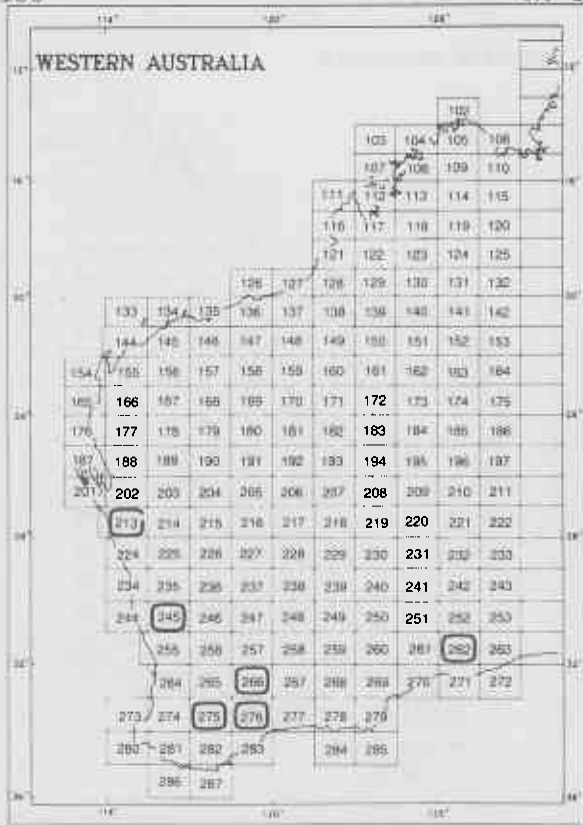
Parmelia tinctorum Nyl.



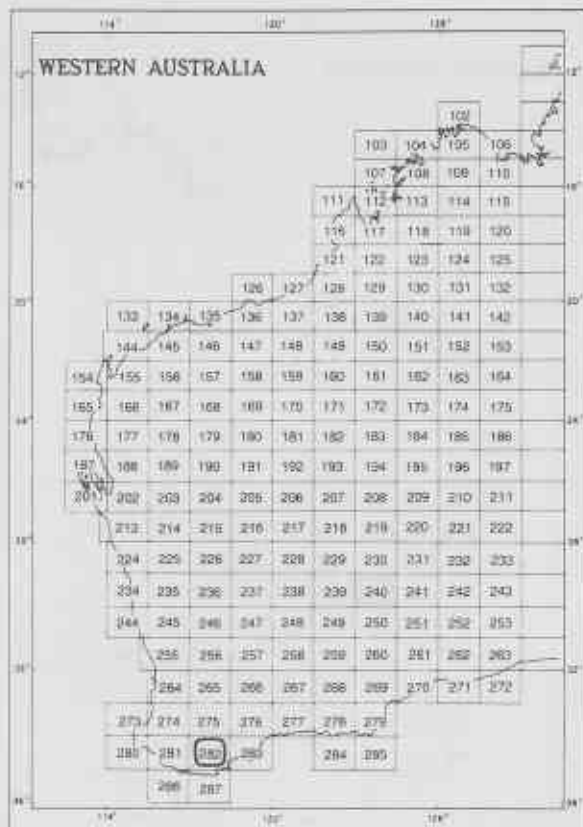
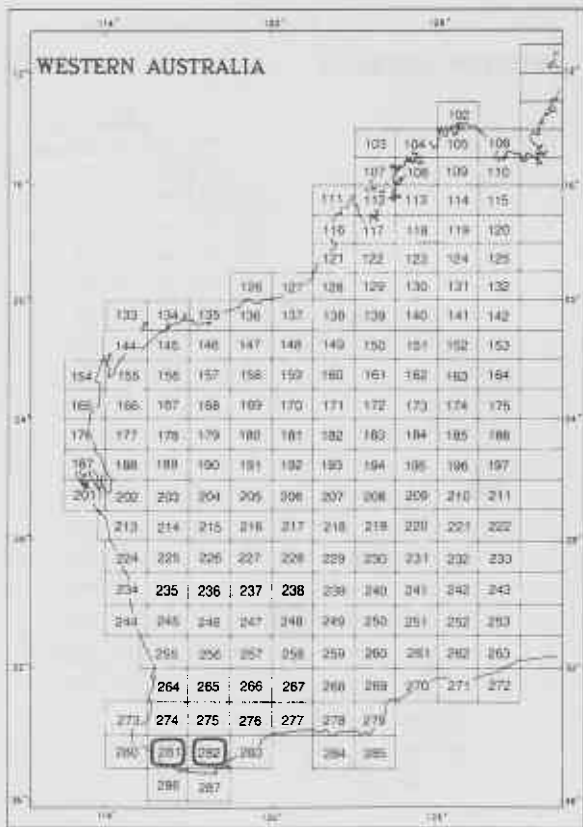
**Parmelia tokajensis* Gyel.



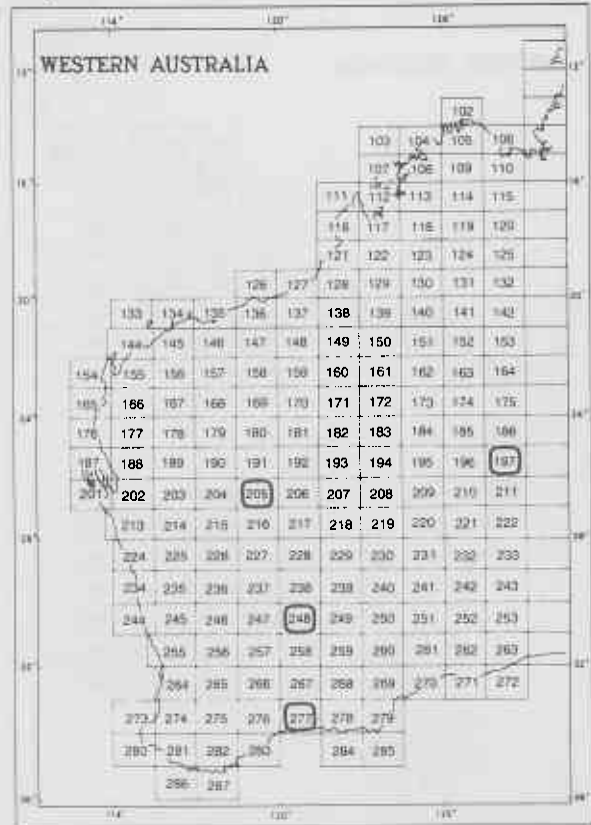
Parmelia verrucella Essl.



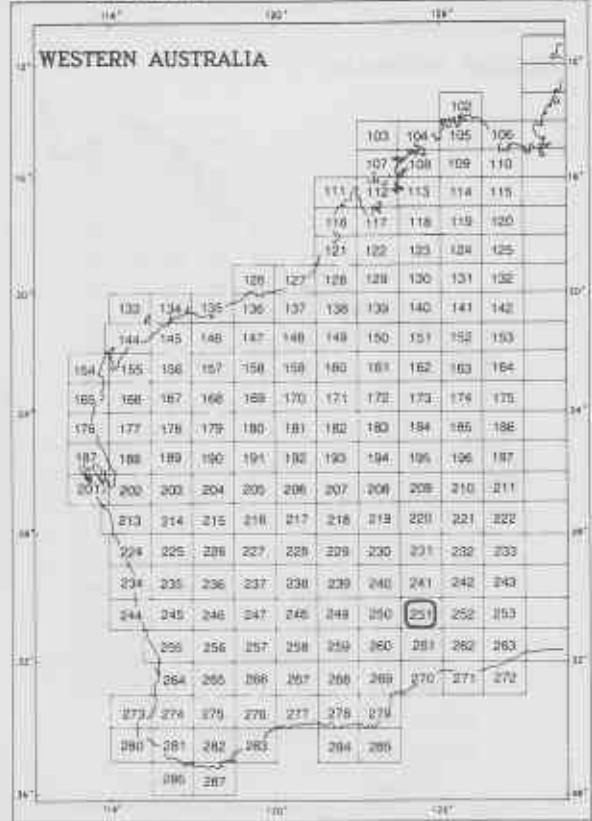
Parmelia willisii Kurokawa & R.Filson *Peccania* sp.



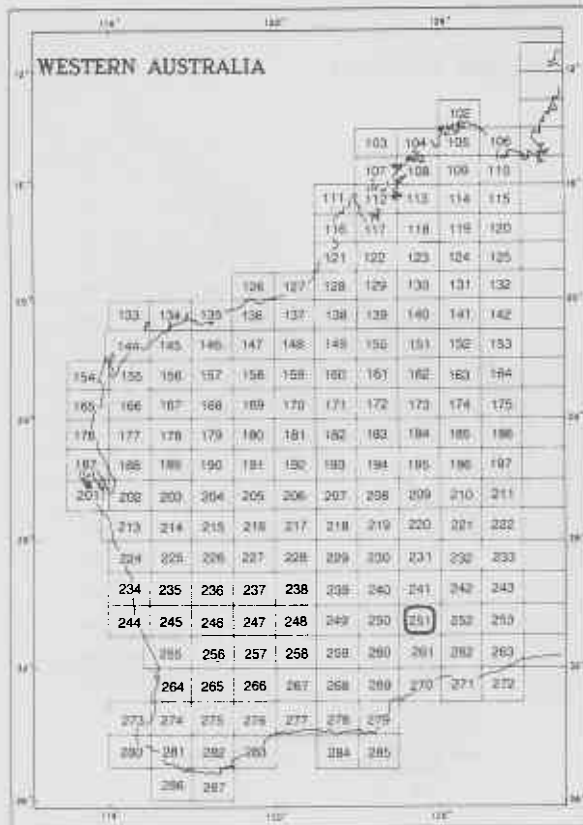
Peltigera dolichorhiza (Nyl.) Nyl. *Peltigera spuria* var. *erumpens* Harm.



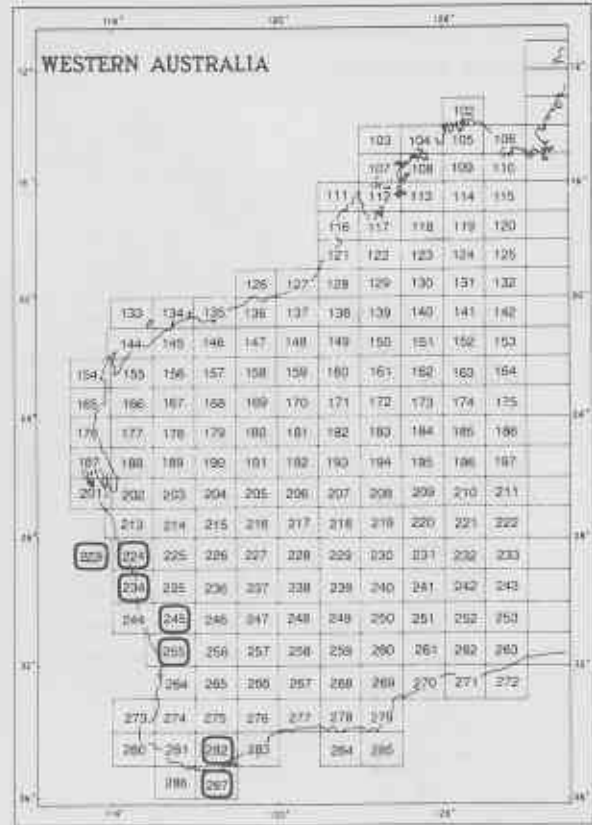
Peltula euploca Vain.



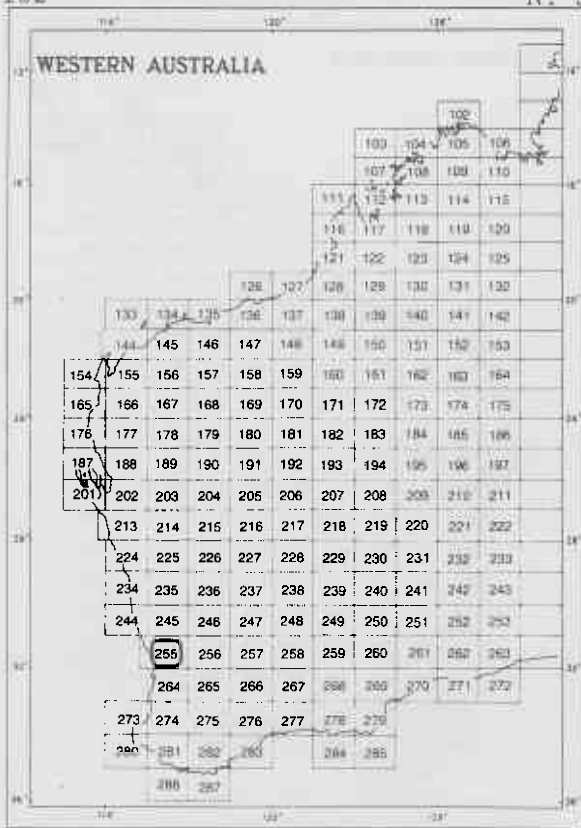
Peltula omphaliza (Nyl. in Eckf.)
Wetmore



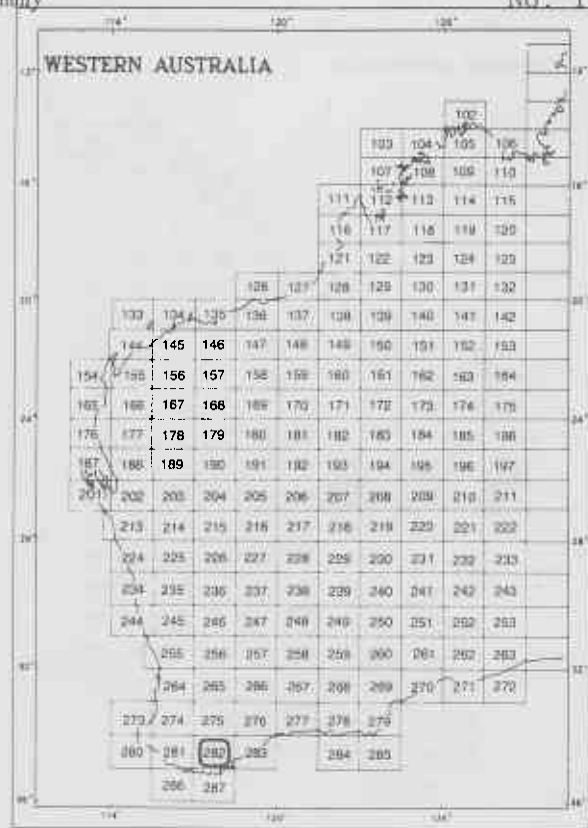
Peltula placodizans (Zahlbr.)
Wetmore



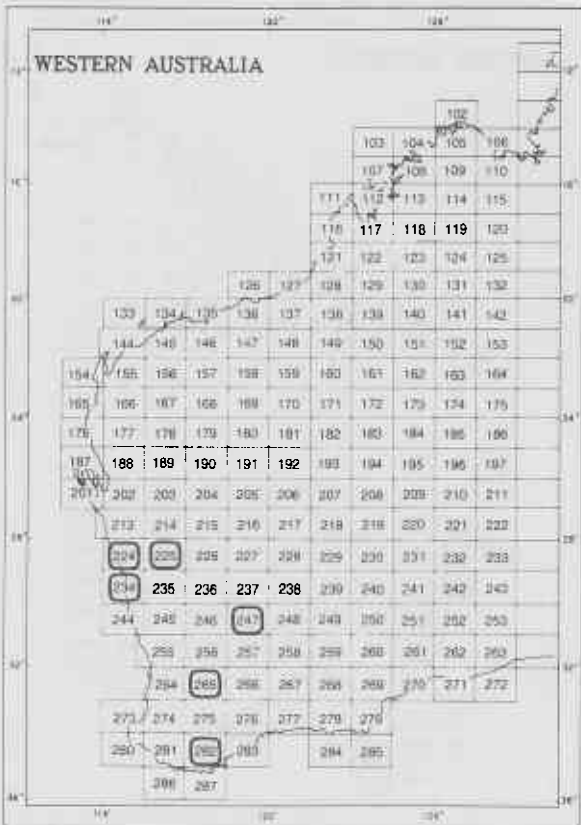
Pertusaria leioplaca (Ach.) DC.



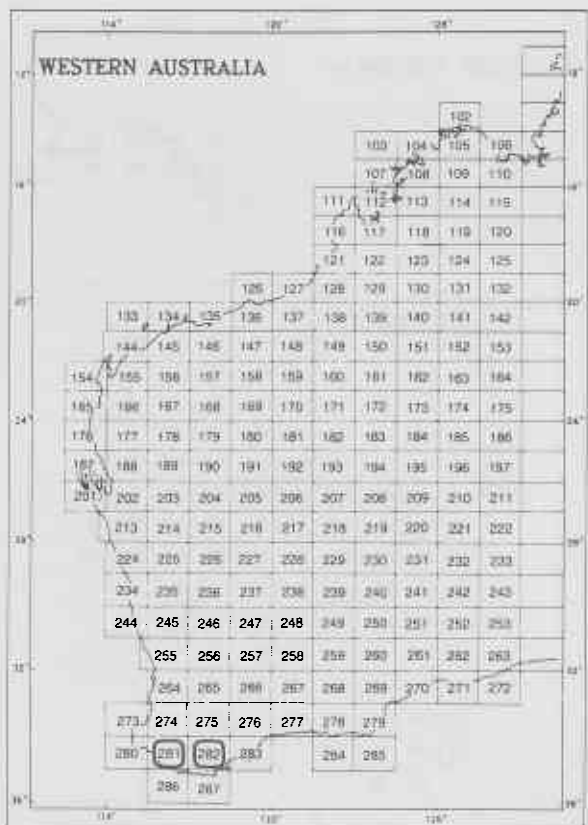
**Phyrcia caesia* (Hoffm.) Hampe



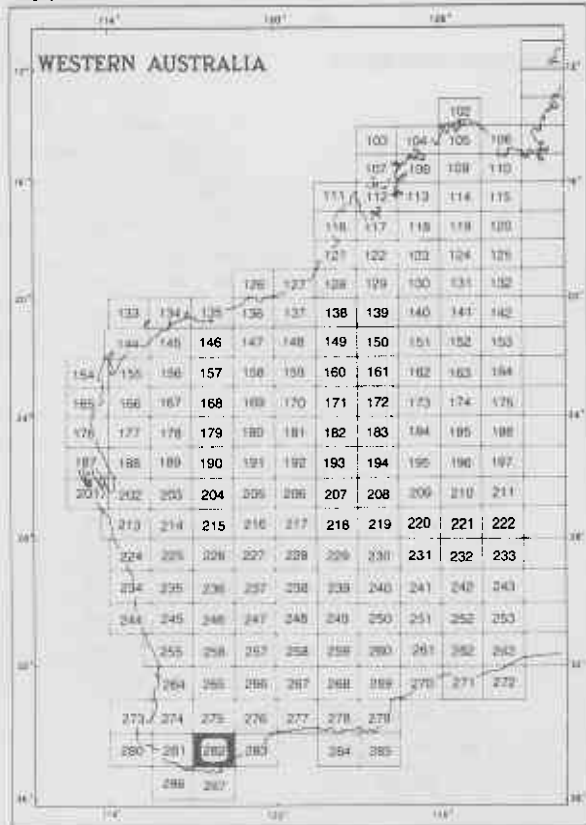
Phyrcia endococcinea (Koeber.) Nyl.



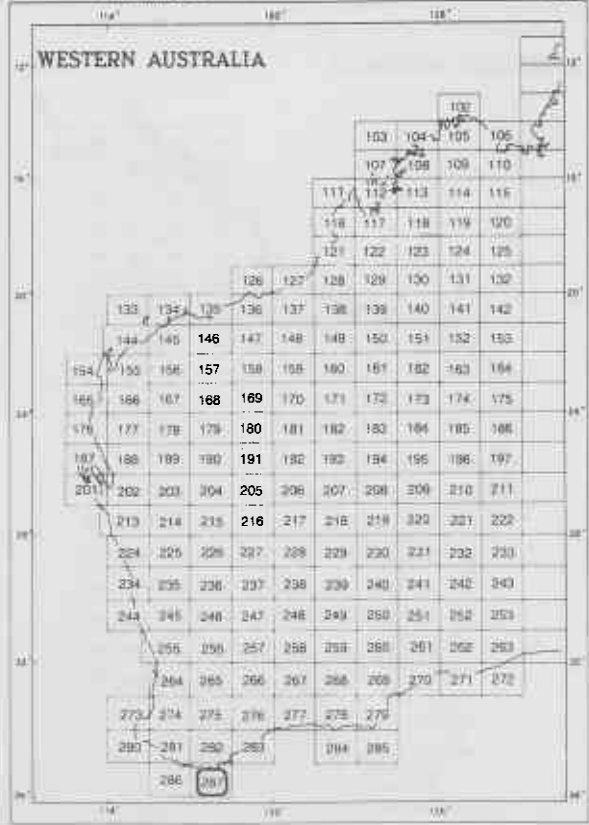
Phyrcia stellaris (Ach.) Nyl.



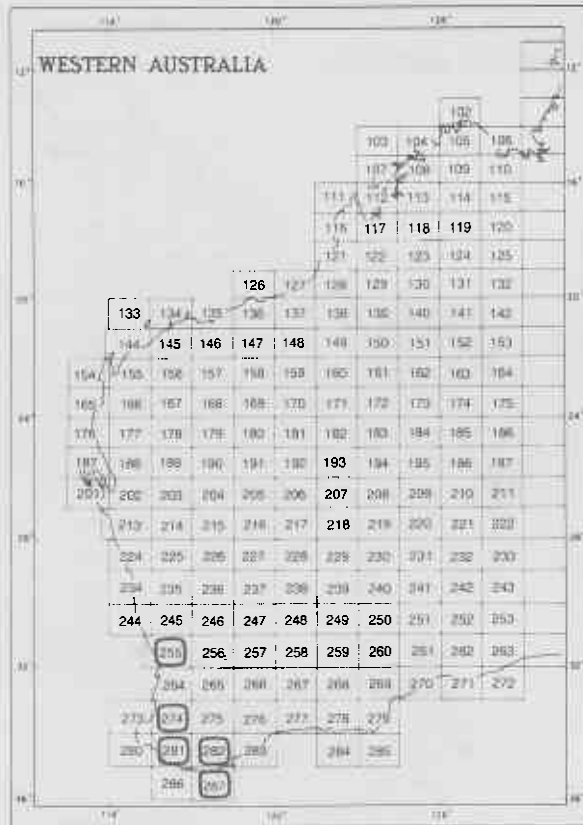
Placopsis sp.



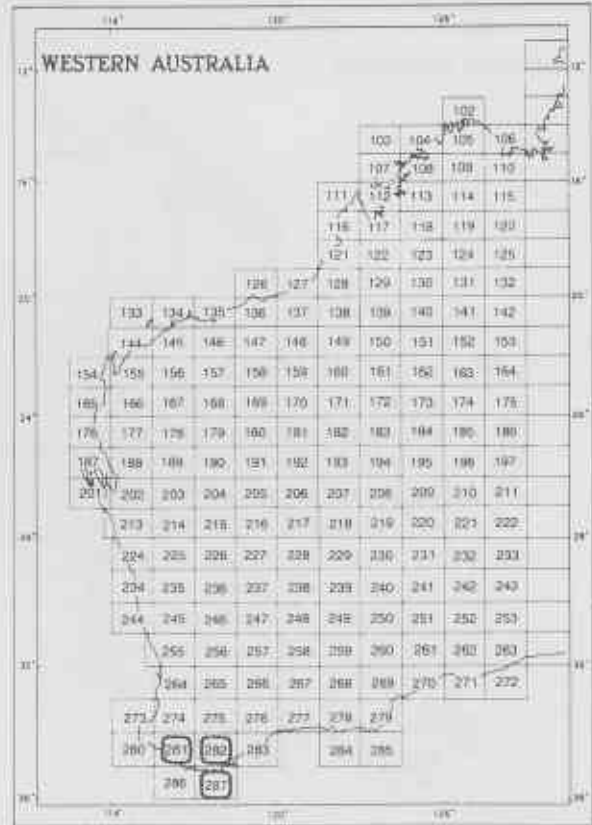
**Porocyphus lichenelloides* A.Henss.



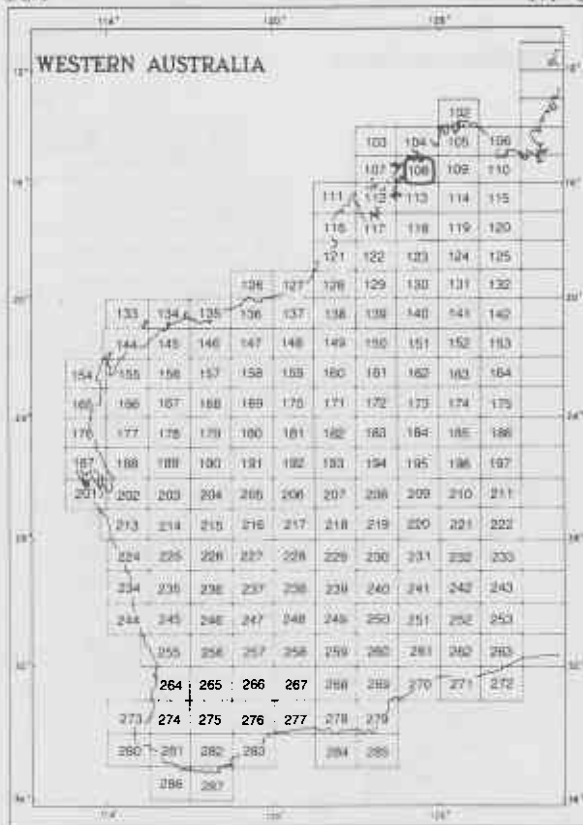
Pseudocyphellaria aurata (Ach.) Vain.



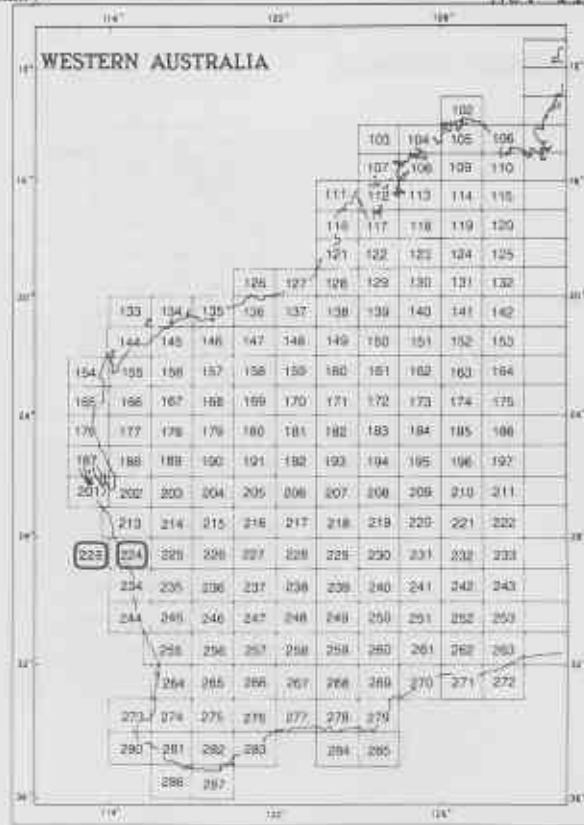
Pseudocyphellaria australiensis
H. Magn.



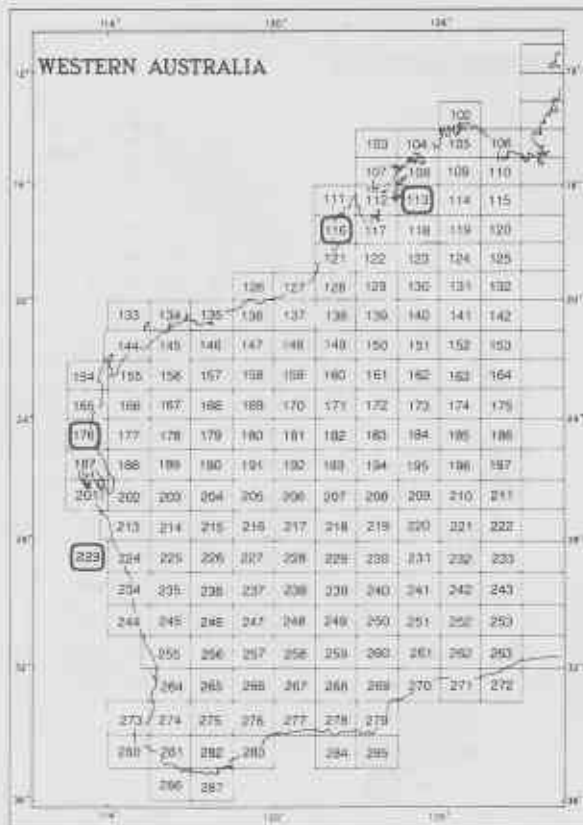
Pseudocyphellaria crocata (L.) Vain.



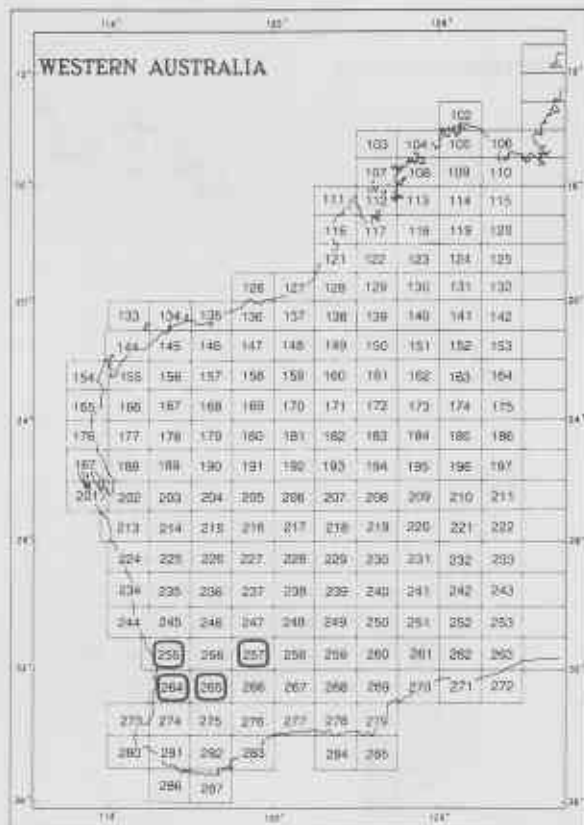
Pyxine coccifera (Fée) Nyl.



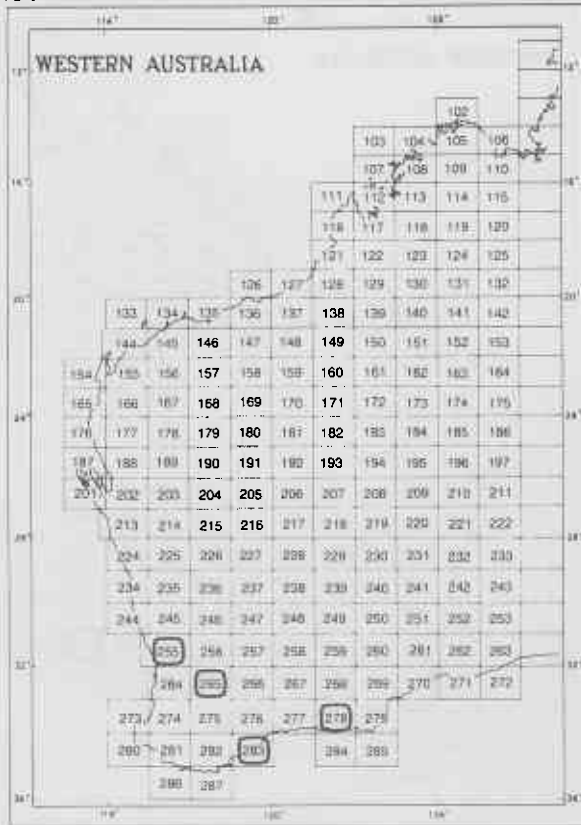
Pyxine cocoes (Sw.) Nyl.



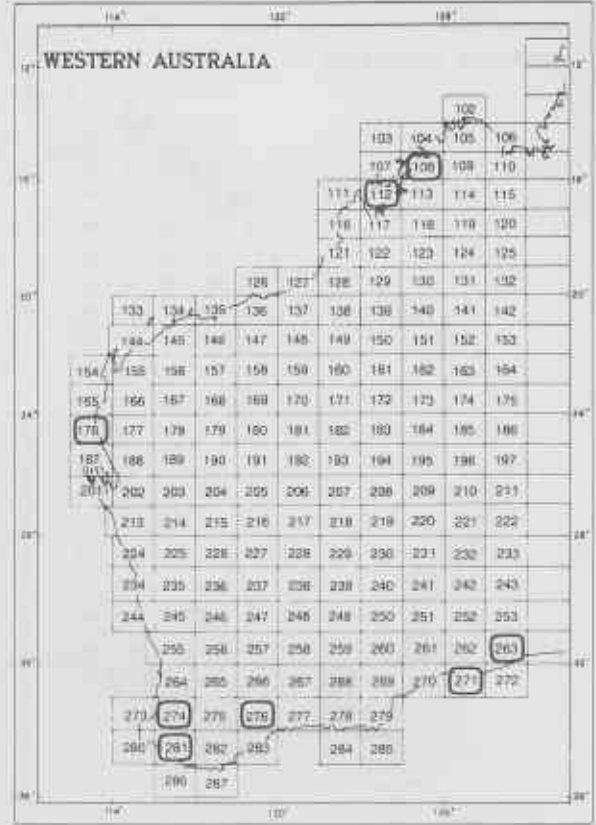
Pyxine petricola Nyl. apud Croub.



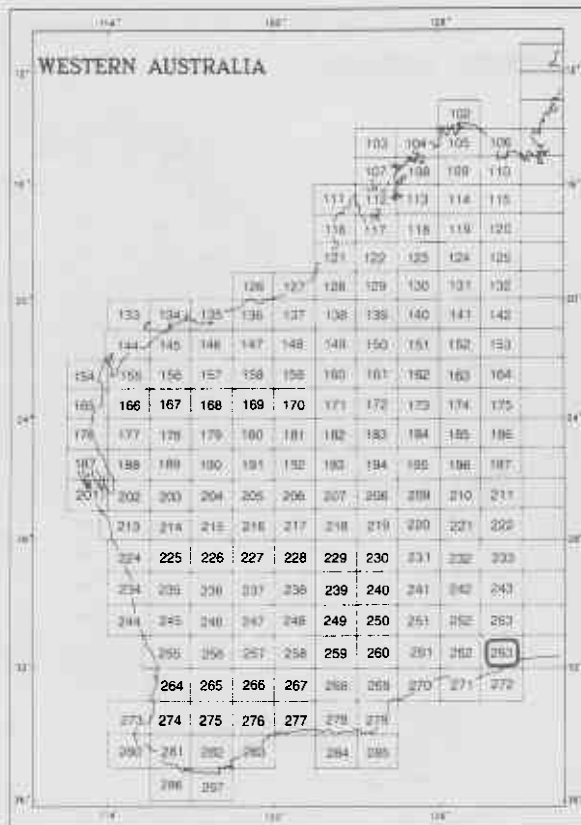
Ramalea cochleata Muell. Arg.



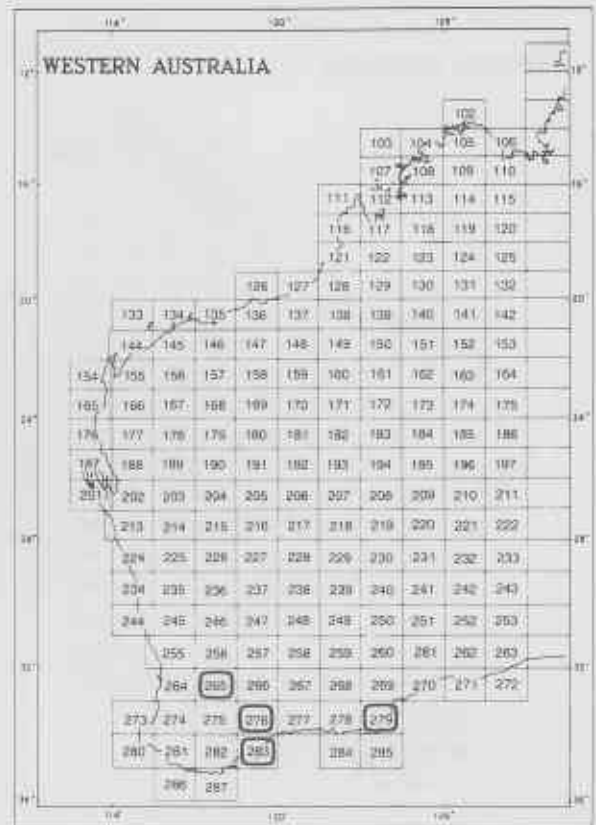
Ramalina calicaris (L.) Roehl.



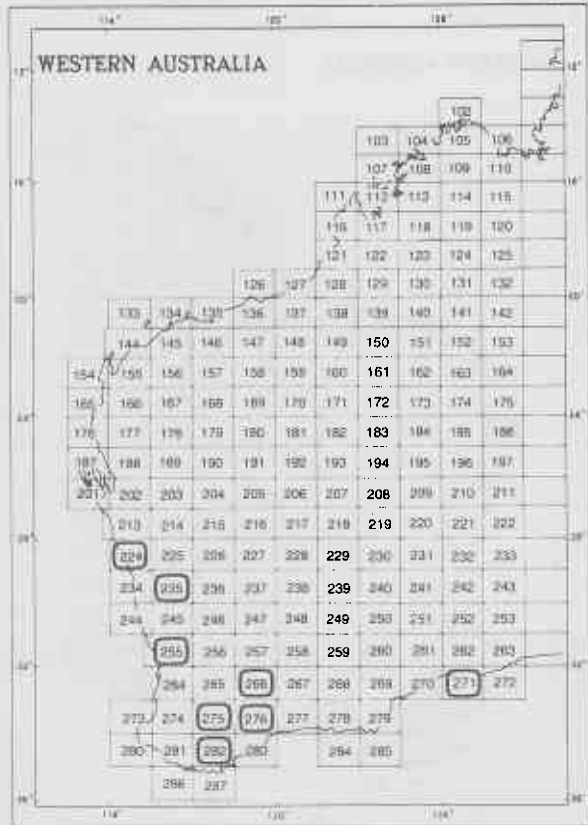
Ramalina celastri (Spreng.) Krog & Swinscow



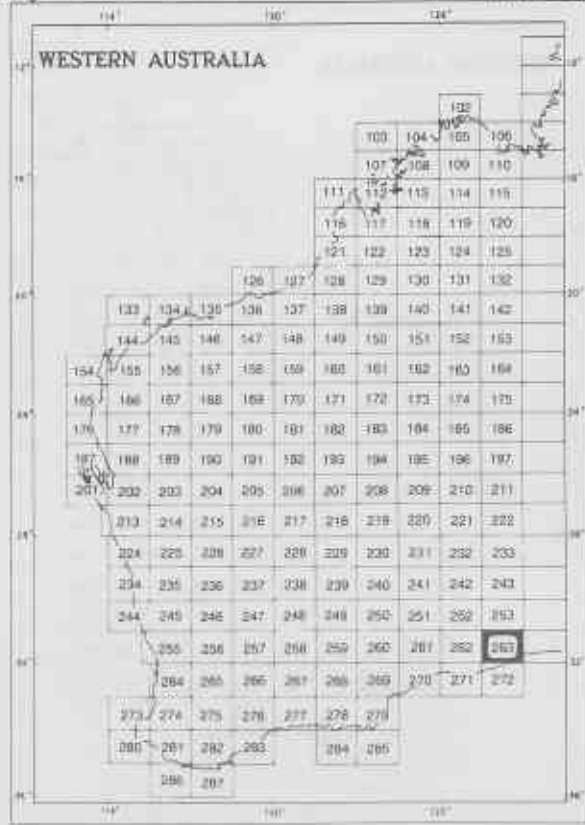
Ramalina evernioides Nyl.



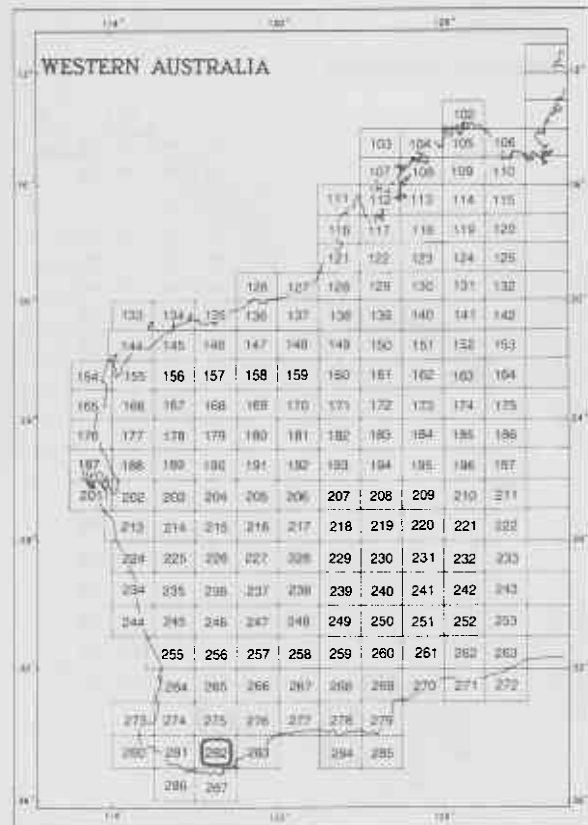
Ramalina geniculata Hook.f. & Tayl.



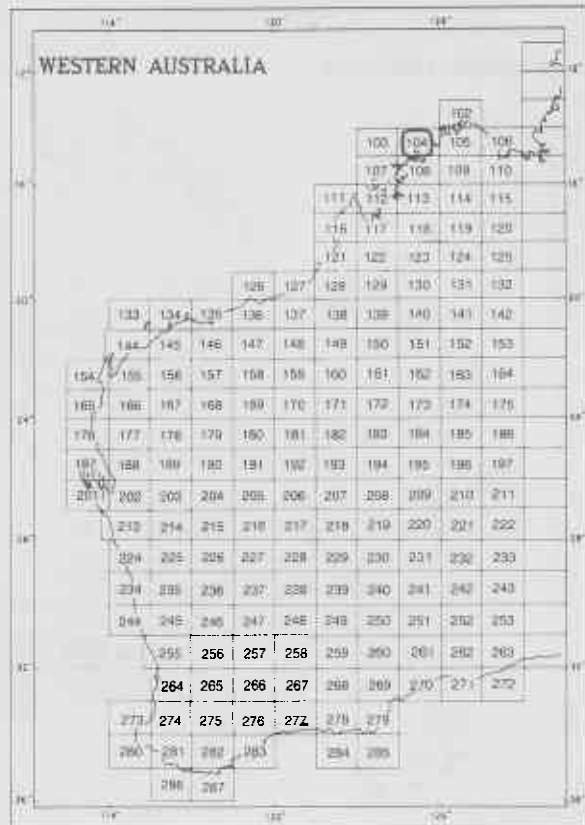
Ramalina inflata Hook. f. & Tayl.



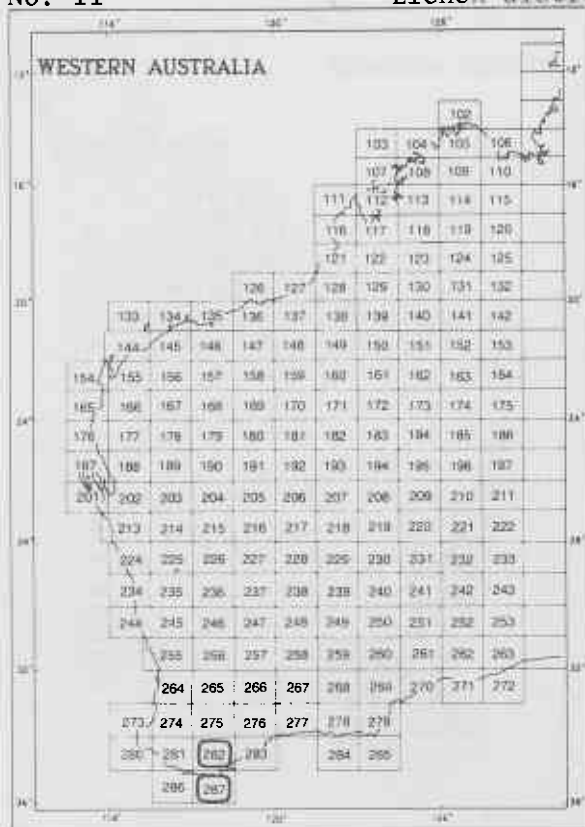
**Ramalina lacerata* Muell. Arg.



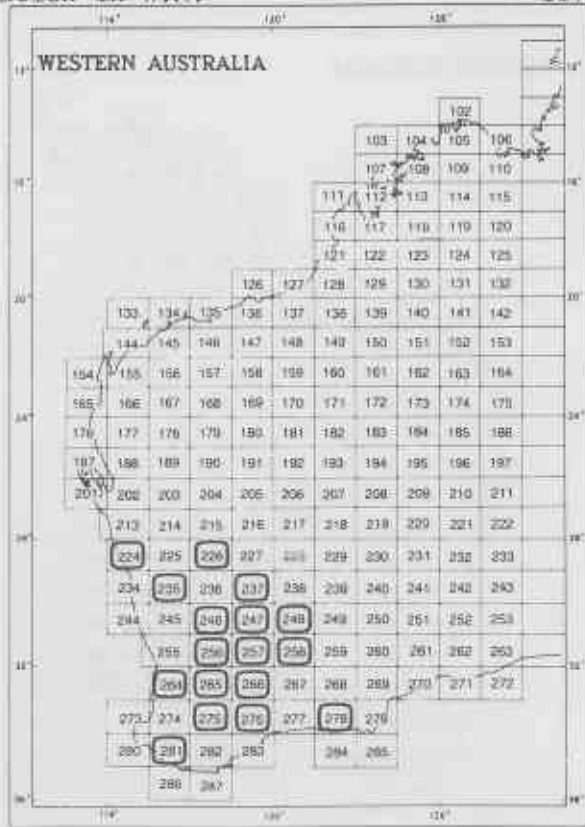
Rhizocarpon geographicum (L.) DC.



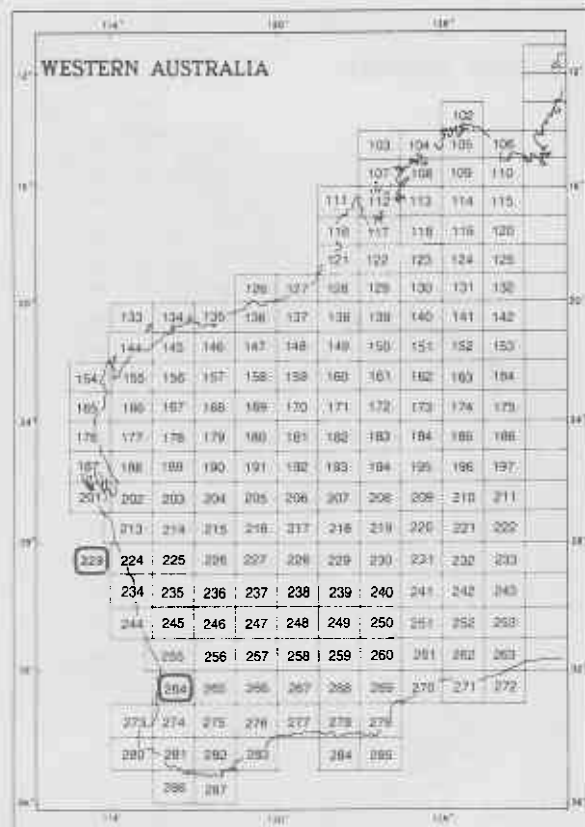
Rocella sp.



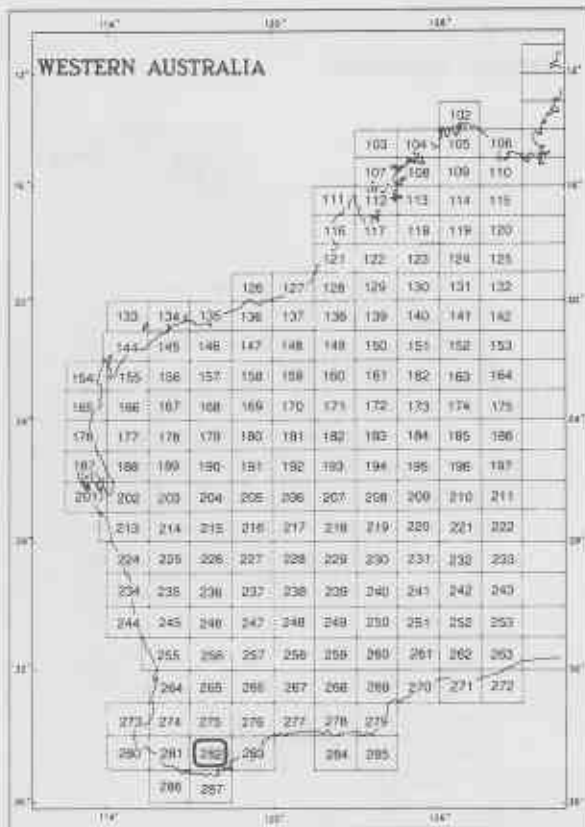
Sarcogyne clavus (Ram.) Krempf.



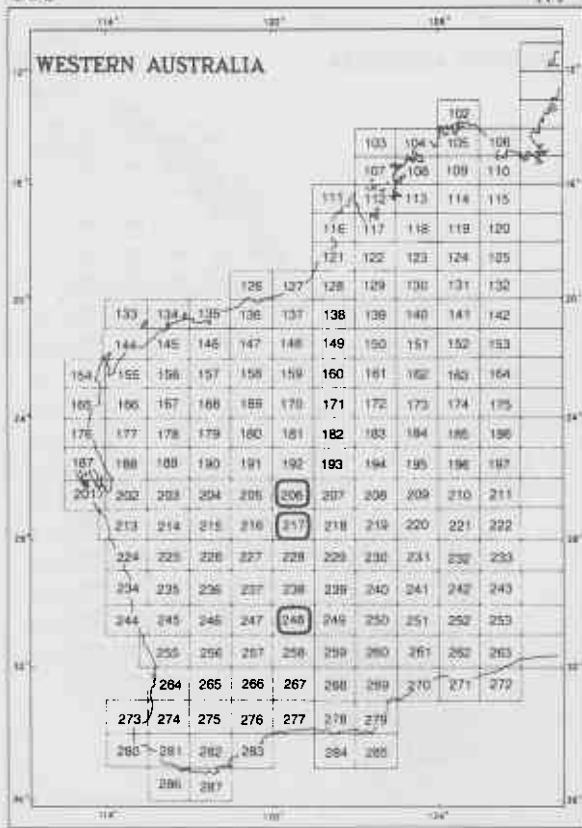
Siphula coriacea Tayl. ex Nyl.



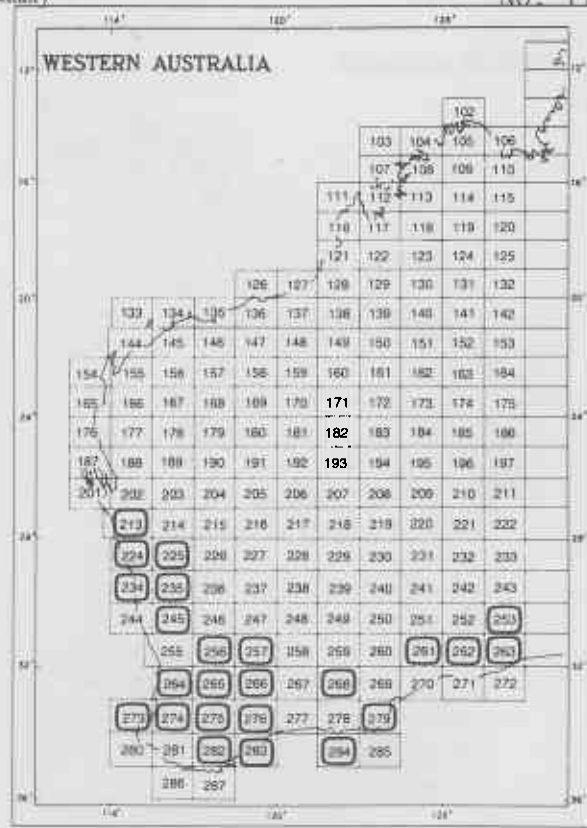
Spilonema paradoxum Born.



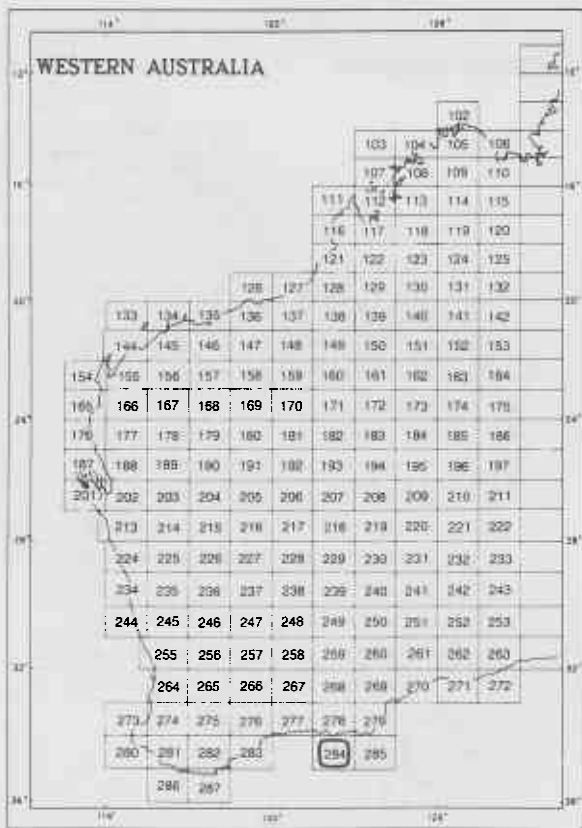
Stereocaulon corticatum Nyl.



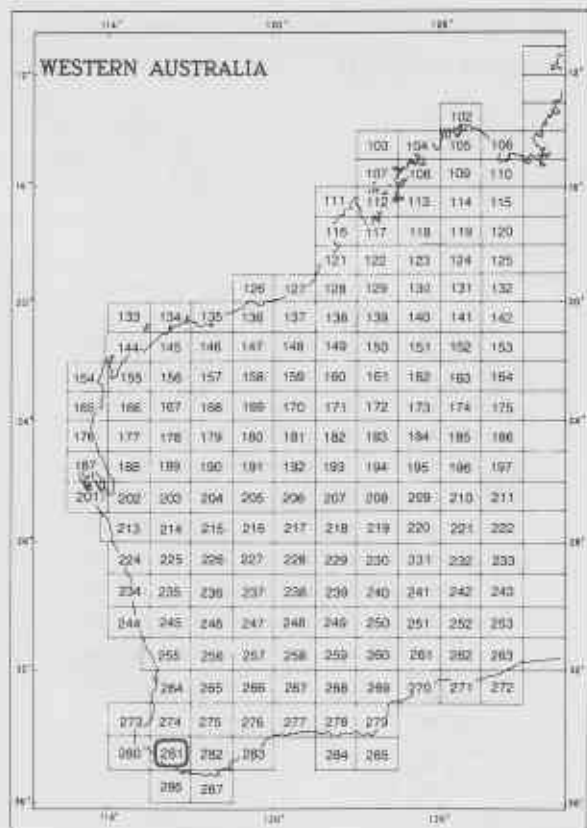
Synalissa sp.



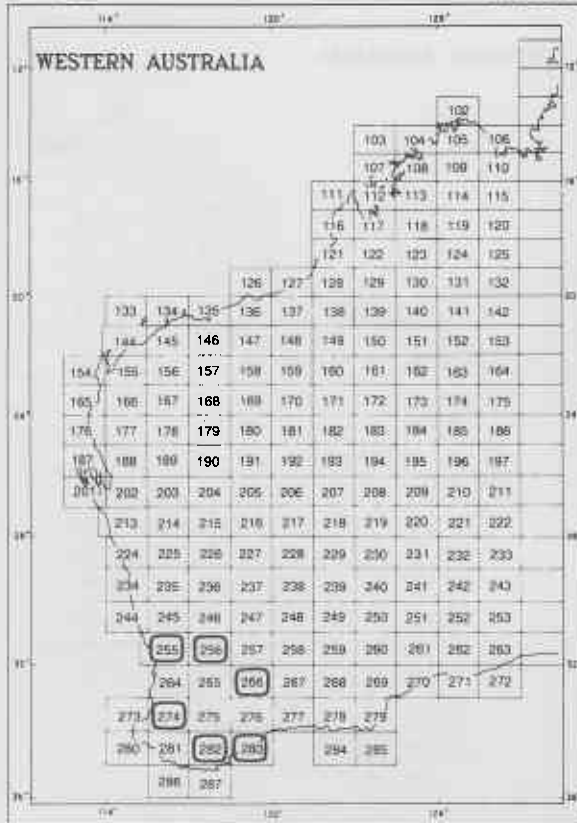
Teloschistes chrysophthalmus (L.)
Beltr.



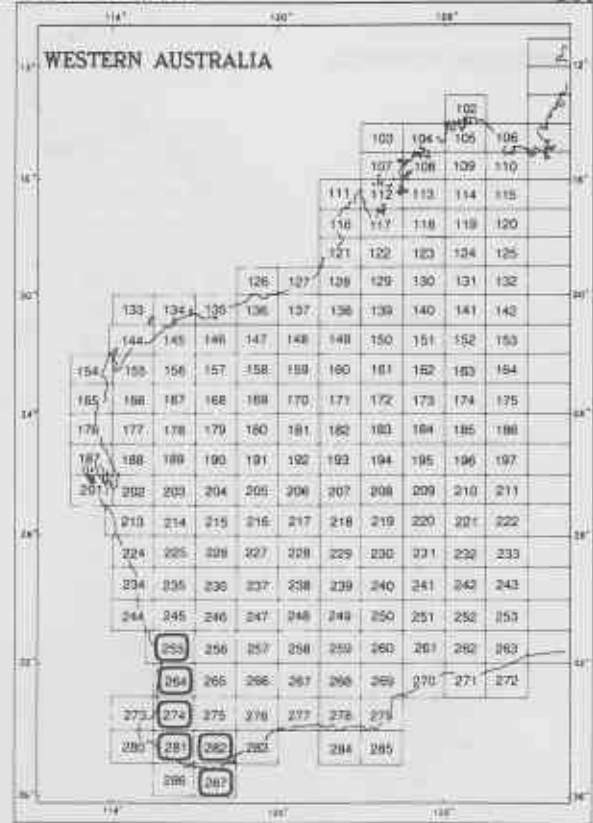
Teloschistes sieberianus (Laur.)
Hillm.



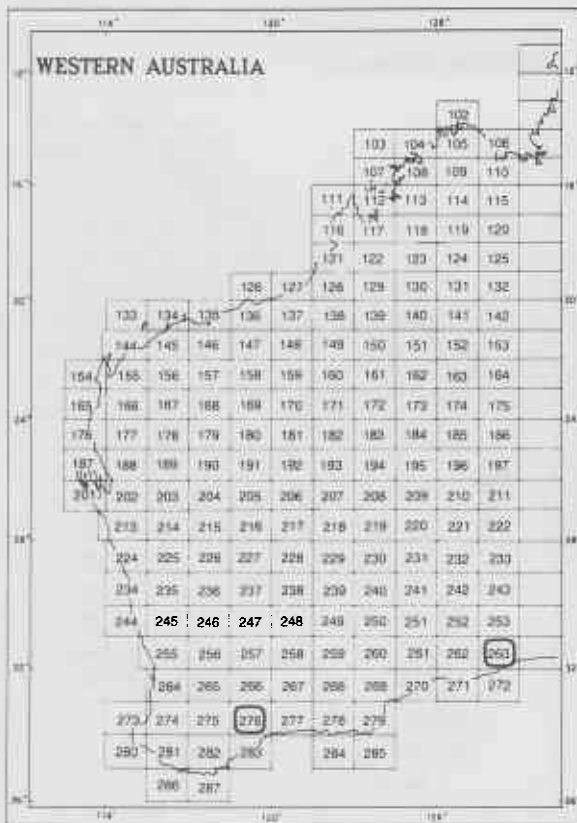
Thelotrema lepadinum (Ach.) Ach.



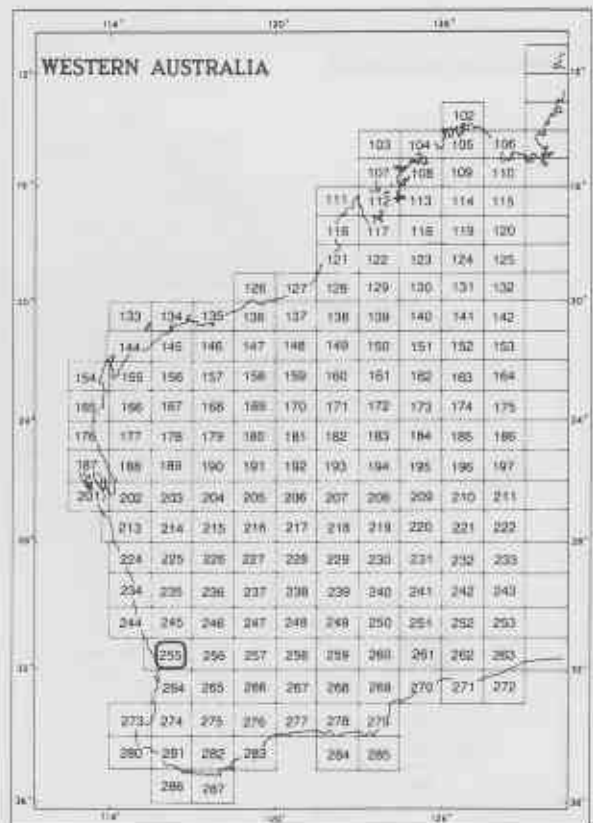
Thysanothecium hookeri Mont. & Berk.



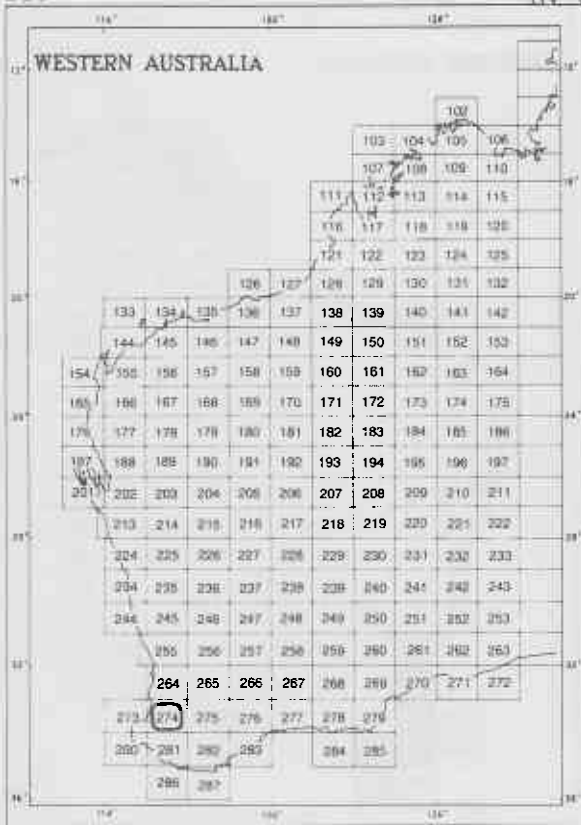
Thysanothecium hyalinum (Tayl.) Nyl.



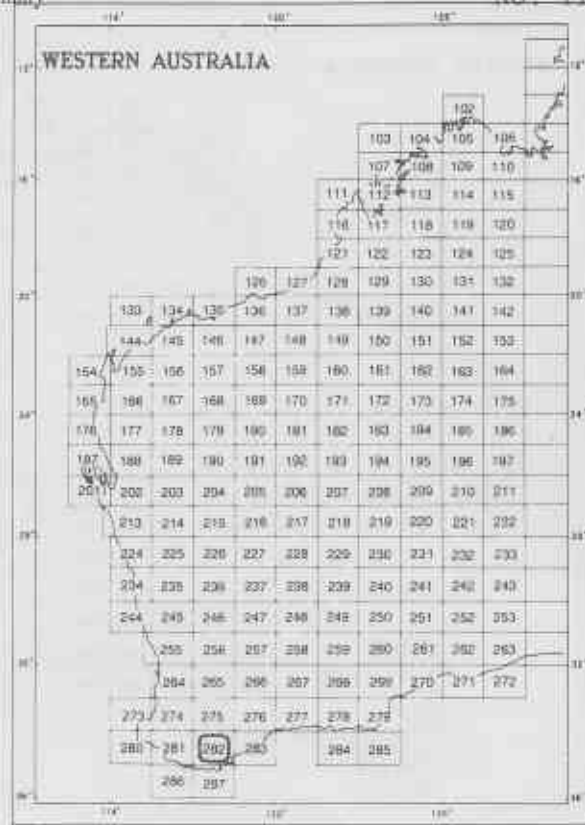
Toninia caeruleonigricans (Lightf.)
Th. Fr.



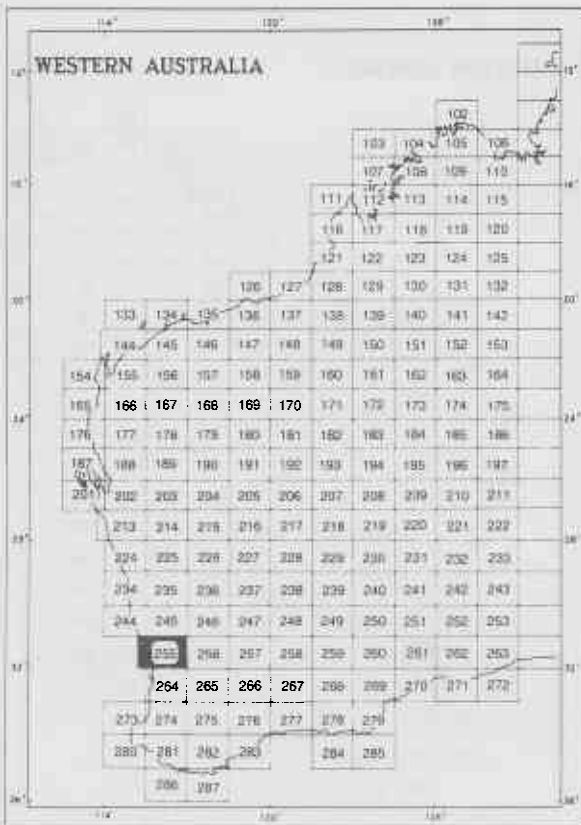
Toninia cumulata (Smrft.) Th. Fr.



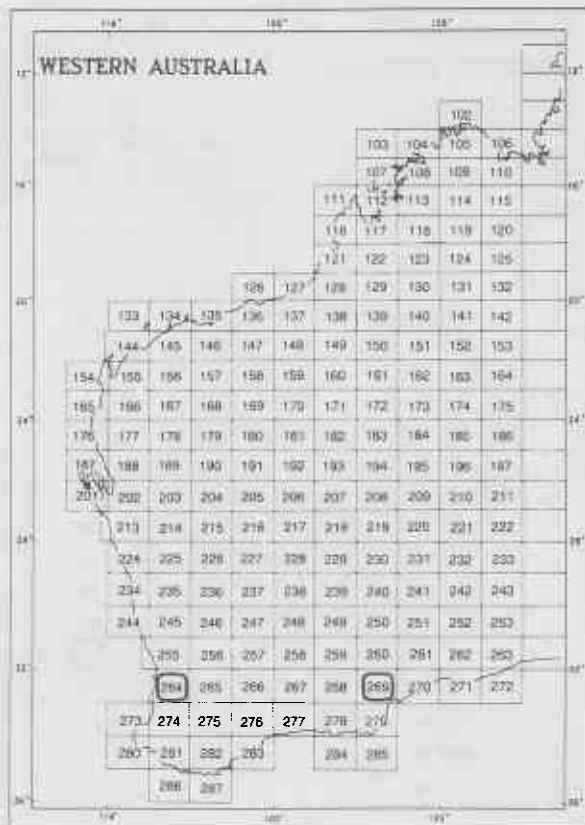
Trapelia sp.



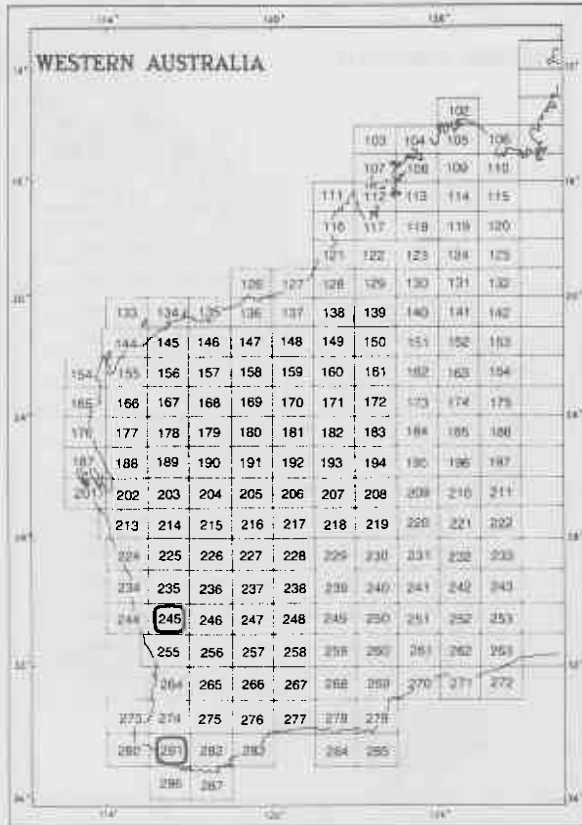
Umbilicaria polyphylla (L.) Baumg.



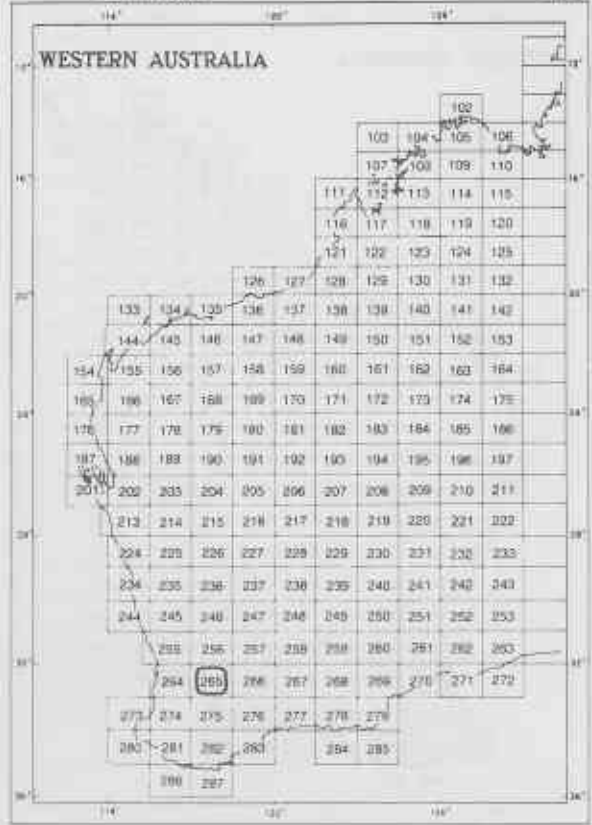
**Usnea angulosa* (Muell.Arg.) Mot.



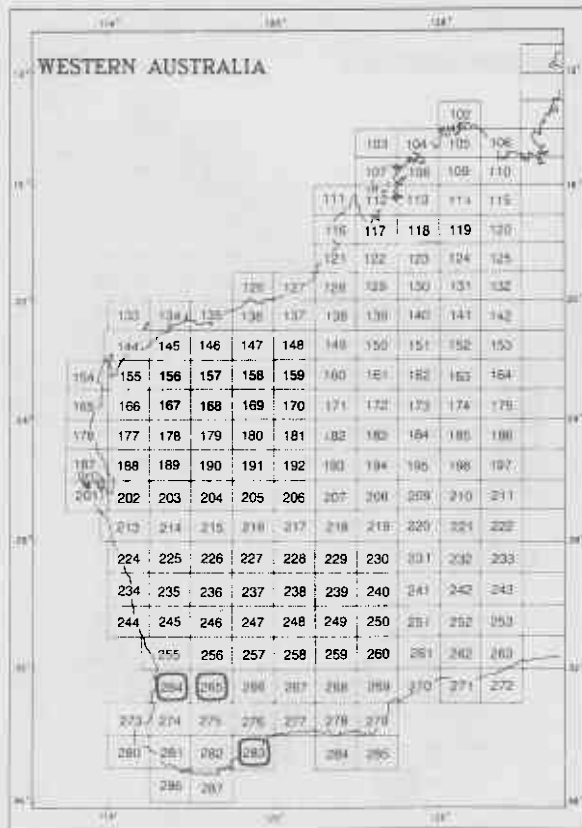
Usnea arida Mot.



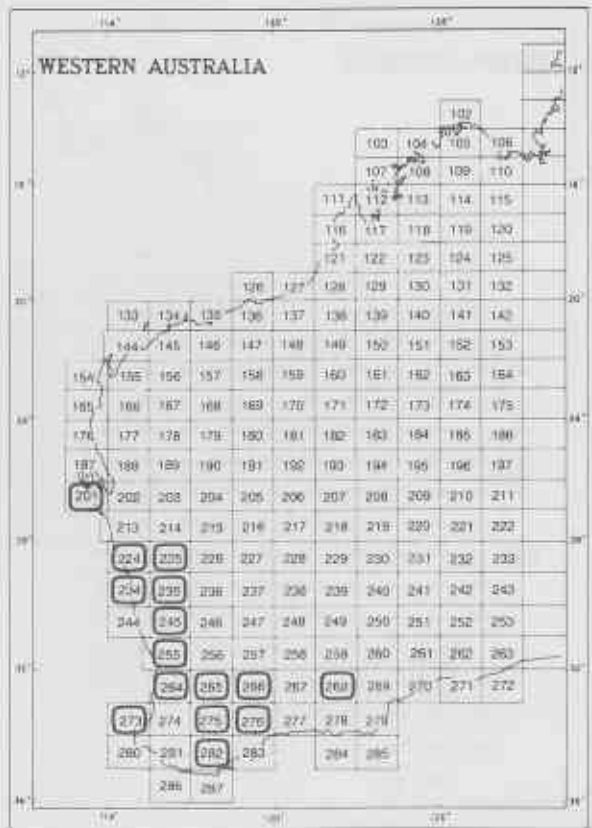
Usnea barbata (L.) Wigg.



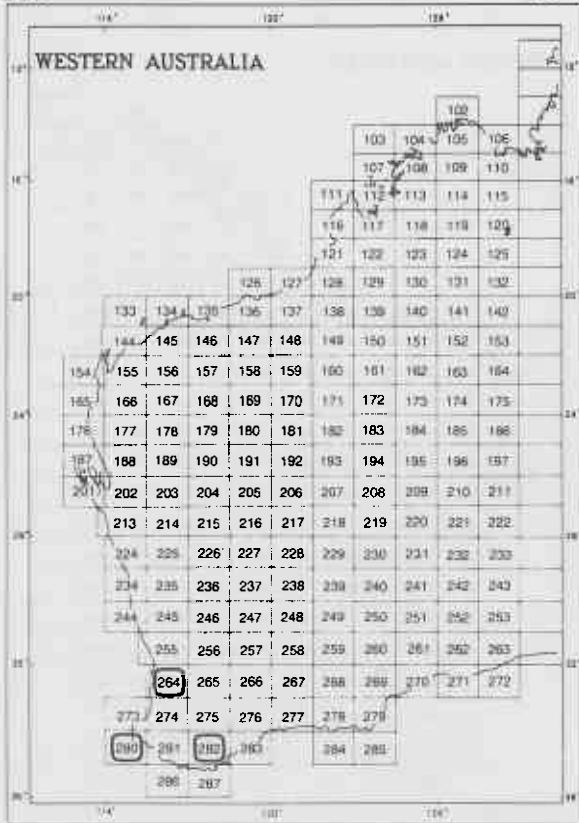
Usnea consimilis Stirt.



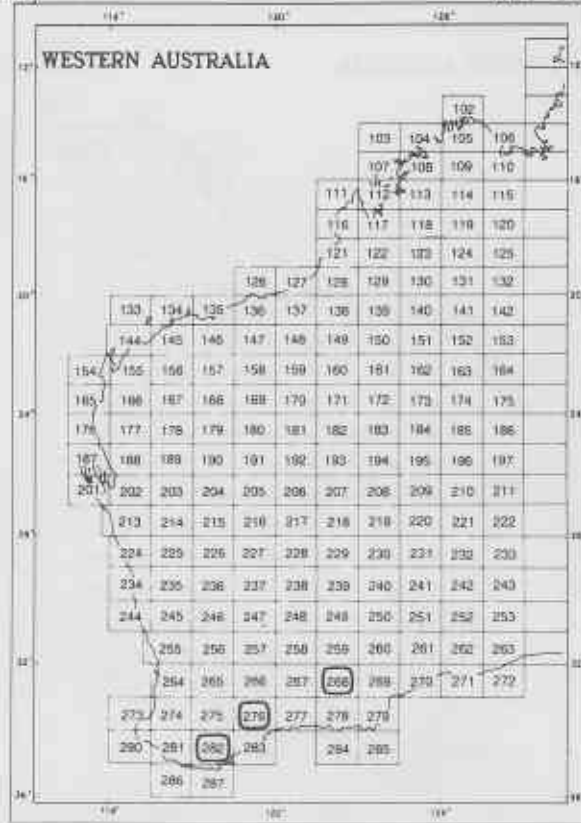
Usnea inermis Mot.



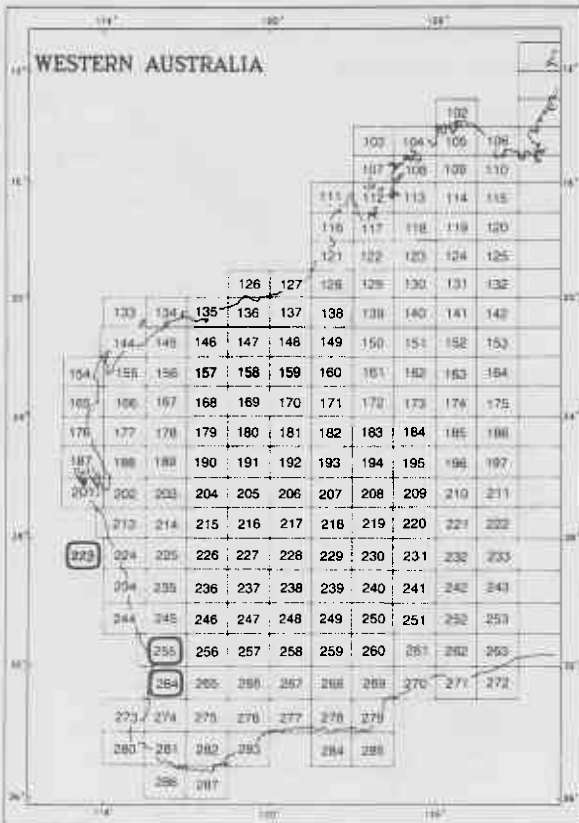
Usnea scabrada Tayl.



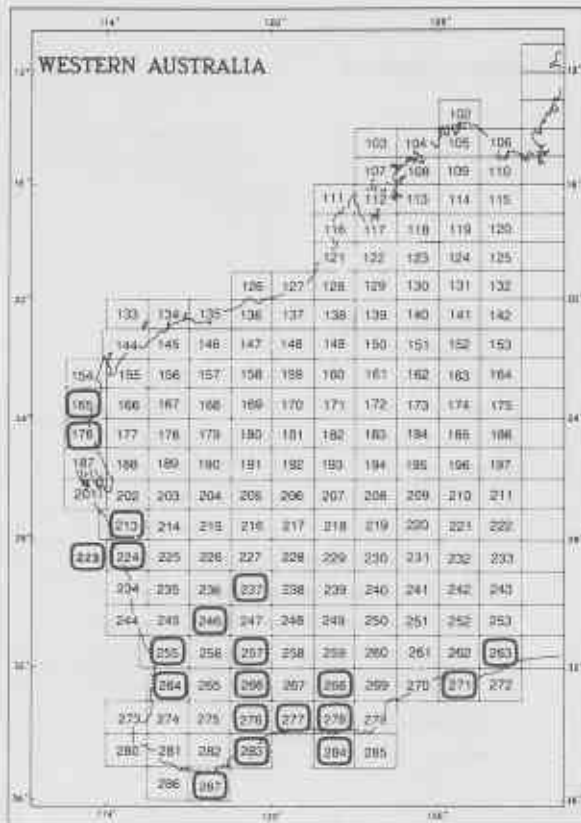
Usnea torulosa (Muell.Arg.) Zahlbr.



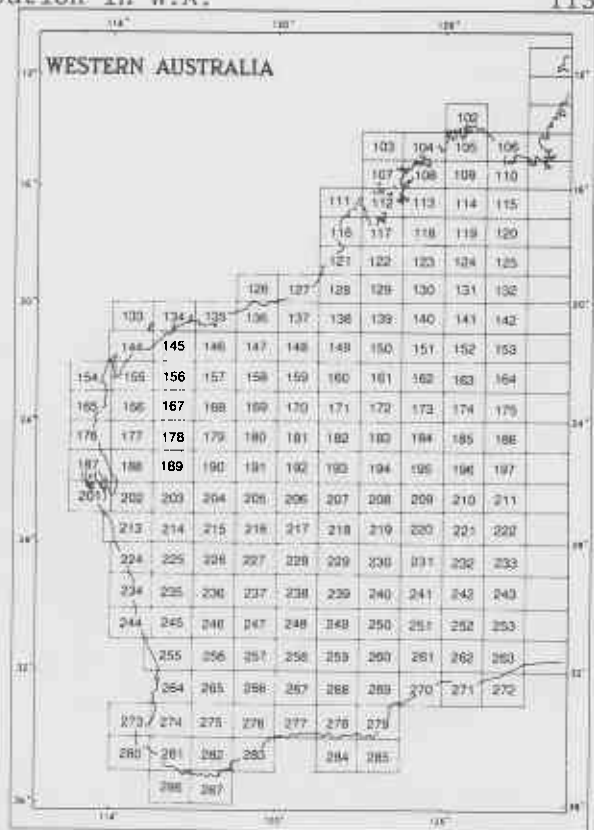
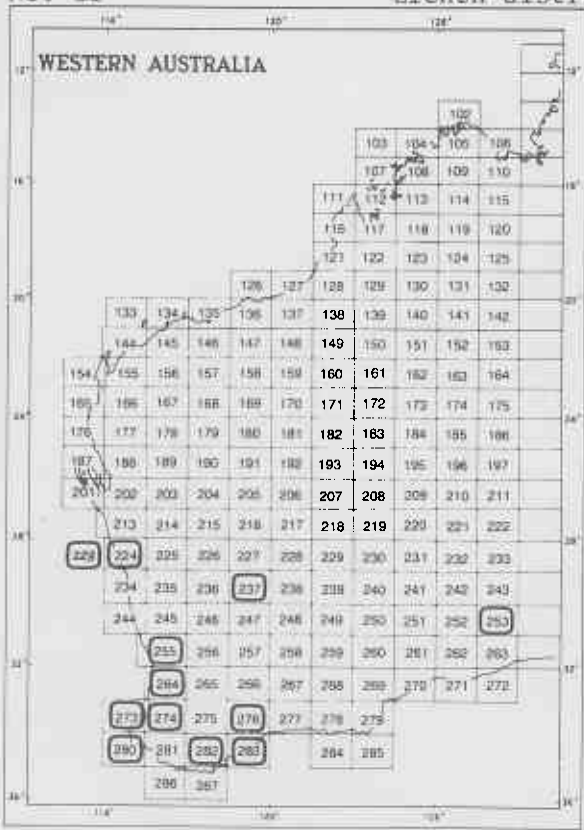
Usnea xanthopoga Nyl.



Verrucaria maura Wahlenb. ex Ach.



Xanthoria ectanea (Ach.) Räs. ex R.Filson



Xanthoria parietina (L.) Th.Fr.

