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APPENDIX I Distribution of plant species across the three
vegetation zones

For each species, the number of sample units in which it was recorded in each forest type is shown. For WSF and TZF, n = 70 and for WTRF, n = 60.

Since the field work was completed, a new species of sedge, *Lepidosperma clipeicola* K.L.Wilson has been described. It is similar to but larger and more robust than *L. urophorum*. It occurs only on the far north coast of NSW and in the vicinity of the study area. It is almost certain that a proportion of my records attributed to *L. urophorum* belong to *L. clipeicola*.

Species names	WSF	TZF	WTRF
BRYOPHYTA			
<i>Dawsonia superba</i>	-	1	6
PSILOACEAE			
<i>Tmesipteris ovata</i> Wakef.	13	16	5
ADIANTACEAE			
<i>Adiantum hispidulum</i> Sw.	2	20	50
HYMENOPHYLLACEAE			
<i>Macroglena caudata</i> (Brackenr.) Copel.	5	20	25
GLEICHENIACEAE			
<i>Sticherus lobatus</i> Wakef.	63	56	8
POLYPODIACEAE			
<i>Microsorium scandens</i> (Forster f.) Tind.	1	-	1
<i>Platynerium bifurcatum</i> (Cav.) C. Chr. subsp <i>bifurcatum</i>	4	12	23
<i>Platynerium superbum</i> Joncheere & Hennipman	-	1	-
<i>Pyrrosia rupestris</i> (R. Br.) Ching	-	1	4
CYATHEACEAE			
<i>Cyathea australis</i> (R. Br.) Domin.	41	39	17
<i>Cyathea leichhardtiana</i> (F. Muell.) Copel.	6	21	48
DICKSONIACEAE			
<i>Calochlaena dubia</i> (R. Br.) M. Turner & R. White	29	23	-
DENNSTAEDTIACEAE			
<i>Pteridium esculentum</i> (Forster f.) Cockayne	35	3	-
ASPLENIACEAE			
<i>Asplenium australasicum</i> (Smith) Hook.	1	4	26
<i>Asplenium polyodon</i> Forster f.	1	-	-

Species names	WSF	TZF	WTRF
DRYOPTERIDACEAE			
<i>Polystichum formosum</i> Tind.	8	3	3
DAVALLIACEAE			
<i>Davallia pyxidata</i> Cav.	1	-	5
BLECHNACEAE			
<i>Blechnum cartilagineum</i> Sw.	17	37	27
<i>Blechnum patersonii</i> (R. Br.) Mett.	-	-	21
EUPOMATIACEAE			
<i>Eupomatia bennettii</i> F. Muell.	-	2	-
<i>Eupomatia laurina</i> R. Br.	1	2	-
ARISTOLOCHIACEAE			
<i>Aristolochia praevenosa</i> F. Muell.	-	-	2
WINTERACEAE			
<i>Tasmania insipida</i> R. Br. ex DC.	-	10	26
MONIMACEAE			
<i>Daphnandra</i> sp. D	-	1	5
<i>Daphnandra tenuipes</i> Perkins	-	15	51
<i>Doryphora sassafras</i> Endl.	-	-	13
<i>Wilkiea huegeliana</i> (Tul.) A. DC.	3	37	60
LAURACEAE			
<i>Beilschmiedia elliptica</i> C. White & Francis	1	8	22
<i>Beilschmiedia obtusifolia</i> (F. Muell. ex Meissner) F. Muell.	-	3	1
<i>Cryptocarya erythroxylon</i> Maiden & Betche	-	1	-
<i>Cryptocarya glaucescens</i> R. Br.	3	10	23
<i>Cryptocarya meissneriana</i> Frodin	4	33	53
<i>Cryptocarya microneura</i> Meissner	2	6	1
<i>Cryptocarya obovata</i> R. Br.	1	1	-
<i>Cryptocarya rigida</i> Meissner	70	62	1
<i>Cinnamomum camphora</i> (L.) Nees	7	9	1
<i>Cinnamomum oliveri</i> Bailey	37	65	56
<i>Endiandra discolor</i> Benth.	3	17	20
<i>Endiandra hayesii</i> Kosterm.	-	1	4
<i>Litsea australis</i> B. Hyland	-	16	35
<i>Litsea reticulata</i> (Meissner) F. Muell.	5	8	14
<i>Neolitsea australiensis</i> Kosterm.	-	1	-
<i>Neolitsea dealbata</i> (R. Br.) Merr.	11	41	56
PIPERACEAE			
<i>Piper novae-hollandiae</i> Miq.	-	-	2
MENISPERMACEAE			
<i>Hypserpa decumbens</i> (Benth.) Diels	-	1	-
<i>Legnephora moorei</i> (F. Muell.) Miers	-	2	4
<i>Sarcopetalum harveyanum</i> F. Muell.	4	17	25
<i>Stephania aculeata</i> Bailey	15	19	4
<i>Stephania japonica</i> (Thunb.) Miers var <i>discolor</i> (Blume) Forman	1	-	-
<i>Tinospora smilacina</i> Benth.	-	3	-

Species names	WSF	TZF	WTRF
RANUNCULACEAE			
<i>Clematis aristata</i> R. Br. ex DC.	15	21	-
DILLENACEAE			
<i>Hibbertia aspera</i> DC.	8	-	-
<i>Hibbertia dentata</i> R. Br. ex DC.	69	50	-
<i>Hibbertia scandens</i> (Willd.) Gilg	4	4	1
STERCULIACEAE			
<i>Commersonia fraseri</i> Gay	3	-	-
<i>Rulingia salviifolia</i> (Hook. ex Steetz) Benth.	2	-	-
ELAEOCARPACEAE			
<i>Elaeocarpus kirtonii</i> F. Muell. ex Bailey	-	3	5
<i>Elaeocarpus reticulatus</i> Smith	62	51	-
<i>Sloanea australis</i> (Benth.) F. Muell.	-	-	8
<i>Sloanea woollsii</i> F. Muell.	5	17	35
MORACEAE			
<i>Ficus fraseri</i> Miq.	-	1	-
<i>Malaisia scandens</i> (Lour.) Planchon subsp. <i>scandens</i>	1	3	13
RHAMNACEAE			
<i>Alphitonia excelsa</i> (Fenzl) Reisseck ex Benth.	1	1	-
THYMELAEACEAE			
<i>Wikstroemia indica</i> (L.) C. Meyer	-	1	-
EUPHORBIACEAE			
<i>Austrobuxus swainii</i> (Beuzev. & C. White) Airy Shaw	35	31	25
<i>Baloghia inophylla</i> (Forster f.) P. Green	-	-	4
<i>Breynia oblongifolia</i> Muell. Arg.	8	10	1
<i>Glochidion ferdinandi</i> F. Muell.	-	2	1
<i>Omalthus populifolius</i> Graham	2	9	9
VIOLACEAE			
<i>Viola hederacea</i> Labill.	7	3	-
EBENACEAE			
<i>Diospyros australis</i> (R. Br.) Hiern	-	2	6
<i>Diospyros pentamera</i> (R. Br.) Merr.	-	3	2
SAPOTACEAE			
<i>Amorphospermum whitei</i> Aubrév.	-	1	-
<i>Planchonella australis</i> (R. Br.) Pierre	-	-	17
MYRSINACEAE			
<i>Rapanea howittiana</i> Mez	-	3	7
<i>Rapanea subsessilis</i> (F. Muell.) Mez	2	21	52
<i>Rapanea variabilis</i> (R. Br.) Mez	-	1	-
CASUARINACEAE			
<i>Allocasuarina torulosa</i> (Aiton) L. Johnson	70	42	1

Species names	WSF	TZF	WTRF
CUNONIACEAE			
<i>Caldcluvia paniculosa</i> (F. Muell.) Hoogl.	12	18	39
<i>Callicoma serratifolia</i> Andrews	16	49	9
<i>Ceratopetalum apetalum</i> D. Don	8	39	48
<i>Geissois benthamii</i> F. Muell.	-	6	1
<i>Schizomeria ovata</i> D. Don	26	44	38
ROSACEAE			
<i>Rubus moorei</i> F. Muell. s. orig.	1	-	-
<i>Rubus</i> sp. A	-	-	9
PROTEACEAE			
<i>Banksia spinulosa</i> Smith var. <i>collina</i>	1	-	-
<i>Hakea salicifolia</i> (Vent.) B.L. Burtt.	6	3	-
<i>Helicia ferruginea</i> F. Muell.	-	5	44
<i>Helicia glabrifolia</i> F. Muell.	-	1	-
<i>Lomatia silaifolia</i> (Smith) R. Br.	24	6	-
<i>Orites excelsa</i> R. Br.	1	5	40
<i>Persoonia media</i> R. Br.	58	22	2
<i>Persoonia cornifolia</i> Cunn. ex DC.	1	1	-
<i>Stenocarpus salignus</i> R. Br.	2	6	53
<i>Stenocarpus sinuatus</i> Endl.	-	-	1
<i>Triunia youngiana</i> (C. Moore & F. Muell.) L. Johnson & B. Briggs	10	53	
MYRTACEAE			
<i>Acmena hemilampra</i> (F. Muell. ex Bailey) Merr. & Perry	4	9	28
<i>Acmena smithii</i> (Poiret) Merr. & Perry	14	25	43
<i>Archirhodomyrtus beckleri</i> (F. Muell.) A.J. Scott	8	7	15
<i>Austromyrtus</i> sp. A	-	4	10
<i>Backhousia myrtifolia</i> Peter G. Wilson	-	2	1
<i>Eucalyptus campanulata</i> R. Baker & H. G. Smith	10	-	-
<i>Eucalyptus gummifera</i> (Sol. ex Gaertner) Hochr.	1	1	-
<i>Eucalyptus microcorys</i> F. Muell.	1	-	-
<i>Eucalyptus pilularis</i> Smith	34	20	-
<i>Leptospermum microcarpum</i> Cheel	5	-	-
<i>Lophostemon confertus</i> (R. Br.) Peter G. Wilson & Waterhouse	1	-	-
<i>Pilidiostigma glabrum</i> Burret	1	8	17
<i>Rhodamnia rubescens</i> (Benth.) Miq.	-	2	-
<i>Syncarpia glomulifera</i> (Smith) Niedenzu	51	27	-
<i>Syzygium oleosum</i> (F. Muell.) B. Hyland	1	5	5
<i>Syzygium crebrinerve</i> (C. White) L. Johnson	6	8	16
<i>Syzygium hodgkinsoniae</i> (F. Muell.) L. Johnson	-	1	8
<i>Syzygium luehmannii</i> (F. Muell.) L. Johnson	-	3	19
<i>Tristaniopsis collina</i> Peter G. Wilson & Waterhouse	-	6	2
<i>Uromyrtus australis</i> A.J. Scott	1	2	9
RUTACEAE			
<i>Acronychia pubescens</i> (Bailey) C. White	-	1	7
<i>Acronychia suberosa</i> C. White	1	13	36
<i>Flindersia bennettiana</i> F. Muell. ex Benth.	-	6	4
<i>Halfordia kendack</i> (Montr.) Guillaumin	-	1	18
<i>Melicope hayesii</i> T. Hartley	24	40	25
<i>Melicope micrococca</i> (F. Muell.) T. Hartley	-	1	1

Species names	WSF	TZF	WTRF
<i>Phebalium squameum</i> (Labill.) Engler subsp <i>squameum</i>	5	2	-
<i>Sarcomelicope simplicifolia</i> (Endl.) T. Hartley	-	1	1
<i>Zieria arborescens</i> Sims	1	4	-
SURIANACEAE			
<i>Guilfoylia monostylis</i> (Benth.) F. Muell.	3	1	-
BURSERACEAE			
<i>Canarium australasicum</i> (Bailey) Leenh.	16	14	13
MELIACEAE			
<i>Anthocarapa nitidula</i> (Benth.) Penn. ex Mabb.	-	-	1
<i>Synoum glandulosum</i> (Smith) A. Juss.	28	39	44
SAPINDACEAE			
<i>Diploglottis australis</i> (G. Don) Radlk.	-	1	-
<i>Dodonaea triquetra</i> Wendl.	2	-	-
<i>Elattostachys nervosa</i> (F. Muell.) Radlk.	-	-	1
<i>Harpullia alata</i> F. Muell.	-	2	12
<i>Guioa semiglauca</i> (F. Muell.) Radlk.	-	2	1
<i>Jagera pseudorhus</i> (A. Rich.) Radlk.	-	1	-
<i>Sarcopteryx stipata</i> (F. Muell.) Radlk.	44	66	59
FABACEAE			
<i>Acacia melanoxyton</i> R. Br.	1	-	-
<i>Acacia myrtifolia</i> (Smith) Willd.	1	-	-
<i>Acacia orites</i> Pedley	9	22	2
<i>Acacia ulicifolia</i> (Salisb.) Court	2	-	-
<i>Archidendron grandiflorum</i> (Soland. ex Benth.) Nielsen	-	1	20
<i>Caesalpinia scortechinii</i> (F. Muell.) Hattink	-	11	23
<i>Daviesia arborea</i> W. Hill	10	5	-
<i>Hovea longifolia</i> R. Br.	12	8	-
POLYGALACEAE			
<i>Comesperma volubile</i> Labill.	5	-	-
CELASTRACEAE			
<i>Denhamia celastroides</i> (F. Muell.) Jessup	-	3	24
<i>Maytenus silvestris</i> Lander & L. Johnson	2	1	-
VITACEAE			
<i>Cissus hypoglauca</i> A. Gray	59	49	28
<i>Cissus sterculiifolia</i> (F. Muell. ex Benth.) Planchon	12	17	13
LORANTHACEAE			
<i>Amylothea dictyophleba</i> (F. Muell.) Tieghem	1	1	1
<i>Amyema pendulum</i> (Sieber ex Spengel) Tieghem	-	1	-
<i>Muellerina eucalyptoides</i> (DC.) Barlow	1	-	-
PITTOSPORACEAE			
<i>Billardiera scandens</i> Smith	2	-	-
<i>Citriobatus pauciflorus</i> Cunn. ex Ettingsh.	-	2	22
<i>Pittosporum revolutum</i> Vent.	6	17	35
<i>Pittosporum undulatum</i> Aiton	9	5	1

Species names	WSF	TZF	WTRF
ARALIACEAE			
<i>Astrotricha floccosa</i> DC.	4	1	-
<i>Cephalalaria cephalobotrys</i> (F. Muell.) Harms	-	3	9
<i>Polyscias murrayi</i> (F. Muell.) Harms	-	-	2
<i>Polyscias sambucifolia</i> (Sieber ex DC.) Harms	45	6	-
ASTERACEAE			
<i>Bracteantha bracteata</i> (Vent.) Anderberg & Haegi	2	-	-
<i>Cassinia compacta</i> F. Muell.	20	6	-
<i>Olearia heterocarpa</i> S.T. Blake	7	3	-
<i>Ozothamnus diosmifolius</i> (Vent.) DC.	-	3	-
SOLANACEAE			
<i>Duboisia myoporoides</i> R. Br.	11	12	1
<i>Solanum semiarmatum</i> F. Muell.	-	-	2
EPACRIDACEAE			
<i>Acrotriche aggregata</i> R. Br.	58	25	-
<i>Trochocarpa laurina</i> R. Br.	10	18	4
<i>Leucopogon lanceolatus</i> (Smith) R. Br.	24	10	-
COROKIACEAE			
<i>Corokia whiteana</i> L.S. Smith	-	1	9
SYMPLOCACEAE			
<i>Symplocos baeuerlenii</i> R. Baker	3	13	56
ESCALLONIACEAE			
<i>Abrophyllum ornans</i> (F. Muell.) Hook. f. ex Benth.	-	1	1
<i>Anopterus macleayanus</i> F. Muell.	-	11	22
<i>Cuttsia viburnea</i> F. Muell.	-	1	-
<i>Quintinia sieberi</i> A. DC.	2	-	-
GOODENIACEAE			
<i>Dampiera stricta</i> (Smith) R. Br.	11	-	-
OLEACEAE			
<i>Notelaea longifolia</i> Vent.	1	8	34
RUBIACEAE			
<i>Canthium coprosmoides</i> F. Muell.	3	14	21
<i>Morinda jasminoides</i> Cunn.	10	28	43
<i>Psychotria loniceroides</i> Sieber ex DC.	3	1	-
<i>Psychotria simmondsiana</i> Bailey	5	28	51
<i>Randia benthamiana</i> F. Muell.	8	33	60
APOCYNACEAE			
<i>Alyxia rusCIFolia</i> R. Br.	1	10	41
<i>Melodinus acutiflorus</i> F. Muell.	9	29	39
<i>Melodinus australis</i> (F. Muell.) Pierre	10	51	59
<i>Parsonsia fulva</i> S.T. Blake	6	42	52
<i>Parsonsia induplicata</i> F. Muell.	5	-	-
<i>Parsonsia lanceolata</i> R. Br.	9	3	5
<i>Parsonsia sp. C</i>	1	-	-

Species names	WSF	TZF	WTRF
<i>Parsonsia rotata</i> Maiden & E. Bêche	-	-	2
<i>Parsonsia straminea</i> (R. Br.) F. Muell.	4	4	24
<i>Parsonsia velutina</i> R. Br.	-	2	-
ASCLEPIADACEAE			
<i>Araujia sericiflora</i> Brot.	-	2	-
<i>Thozetia racemosa</i> F. Muell. ex Benth.	-	1	2
<i>Tylophora paniculata</i> R. Br.	-	3	5
<i>Marsdenia longiloba</i> Benth.	-	-	2
<i>Marsdenia lloydii</i> P. Forster	4	16	25
BIGNONIACEAE			
<i>Pandorea baileyana</i> (Maiden & E. Bêche) Steenis	-	-	1
<i>Pandorea pandorana</i> (Andrews) Steenis	-	9	33
GESNERACEAE			
<i>Fieldia australis</i> Cunn.	-	-	1
ACANTHACEAE			
<i>Pseuderanthemum variabile</i> (R. Br.) Radlk.	48	47	1
<i>Pseuderanthemum "astamenoides"</i>	1	-	-
ARACACEAE			
<i>Gymnostachys anceps</i> R. Br.	-	2	16
<i>Pothos longipes</i> Schott	-	1	23
DIOSCORACEAE			
<i>Dioscorea transversa</i> R. Br.	40	44	2
SMILACACEAE			
<i>Smilax australis</i> R. Br.	65	68	56
<i>Smilax glyciophylla</i> Sm.	50	44	38
PETERMANNIACEAE			
<i>Petermannia cirrosa</i> F. Muell.	7	44	55
RIPOGONACEAE			
<i>Ripogonum discolor</i> F. Muell.	-	1	10
LUZURIAGACEAE			
<i>Geitonoplesium cymosum</i> (R. Br.) A. Cunn. ex Hook.	60	66	50
<i>Dryophila moorei</i> Baker	2	22	27
ASTELIACEAE			
<i>Cordyline rubra</i> Otto & A. Dietr.	4	27	52
<i>Cordyline petiolaris</i> (Domin) Pedley	1	11	2
LOMANDRACEAE			
<i>Lomandra longifolia</i> Labill.	57	48	53
<i>Lomandra multiflora</i> (R. Br.) Britten subsp <i>multiflora</i>	11	5	-
<i>Lomandra spicata</i> A.T. Lee	-	1	-
XANTHORRHOEACEAE			
<i>Xanthorrhoea latifolia</i> (A.T. Lee) D.J. Bedford subsp <i>maxima</i>	34	-	-
<i>Xanthorrhoea malacophylla</i> D.J. Bedford	2	-	-

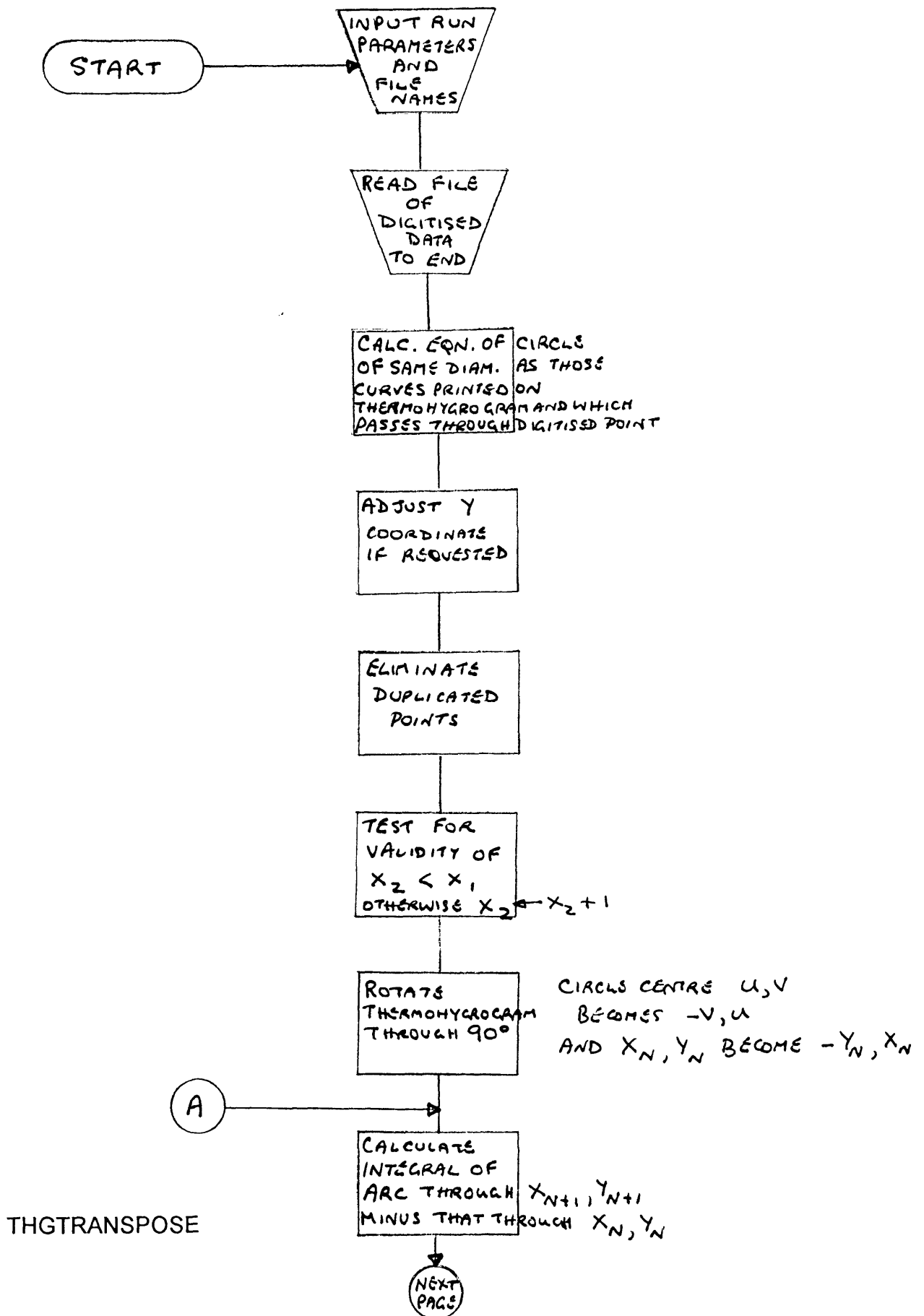
Species names	WSF	TZF	WTRF
PHORMIACEAE			
<i>Dianella caerulea</i> Sims var. <i>caerulea</i>	45	25	2
AMARYLLIDACEAE			
<i>Crinum pedunculatum</i> R. Br.	-	-	2
UVULARIACEAE			
<i>Tripladenia cunninghamii</i> D.Don.	64	64	33
IRIDACEAE			
<i>Patersonia glabrata</i> R. Br.	39	2	-
ORCHIDACEAE			
<i>Cymbidium suave</i> R. Br.	2	1	1
<i>Dendrobium aemulum</i> R. Br.	1	3	7
<i>Dendrobium kingianum</i> Bidwill ex Lindl.	3	-	-
<i>Dendrobium linguiforme</i> Sw.	-	1	-
<i>Dendrobium monophyllum</i> F. Muell.	1	-	1
<i>Dendrobium sp.</i>	-	1	-
<i>Dendrobium tarberi</i> M.A. Clem. & D.L. Jones	2	1	-
<i>Liparis coelogynoides</i> (F. Muell.) Benth.	-	1	-
<i>Liparis reflexa</i> (R. Br.) Lindl.	1	-	-
PHILYDRACEAE			
<i>Helmholtzia glaberrima</i> (Hook. f.) Caruel	-	-	16
ZINGIBERACEAE			
<i>Alpinia caerulea</i> (R. Br.) Benth.	-	1	-
CYPERACEAE			
<i>Exocarya scleroides</i> (F. Muell.) Benth.	7	4	44
<i>Gahnia aspera</i> (R. Br.) Spreng.	2	5	2
<i>Gahnia insignis</i> S.T. Blake	9	20	-
<i>Gahnia melanocarpa</i> R. Br.	-	3	-
<i>Gahnia sieberana</i> Kunth	-	2	-
<i>Lepidosperma elatius</i> Labill.	18	36	1
<i>Lepidosperma laterale</i> R. Br.	47	21	2
<i>Lepidosperma urophorum</i> N.A. Wakef.	42	15	1
<i>Schoenus melanostachys</i> R. Br.	28	22	-
FLAGELLARIACEAE			
<i>Flagellaria indica</i> L.	3	19	39
POACEAE			
<i>Entolasia stricta</i> (R. Br.) Hughes	55	27	-
<i>Opismenus aemulus</i> (R. Br.) Roem & Schult.	1	1	-
ARECACEAE			
<i>Archontophoenix cunninghamiana</i> (H.Wendl)H.Wendl & Drude	68	69	60
<i>Calamus muelleri</i> H.Wendl. & Drude	6	36	60
<i>Linospadix monostachya</i> (Mart.) H.Wendl.	1	29	59

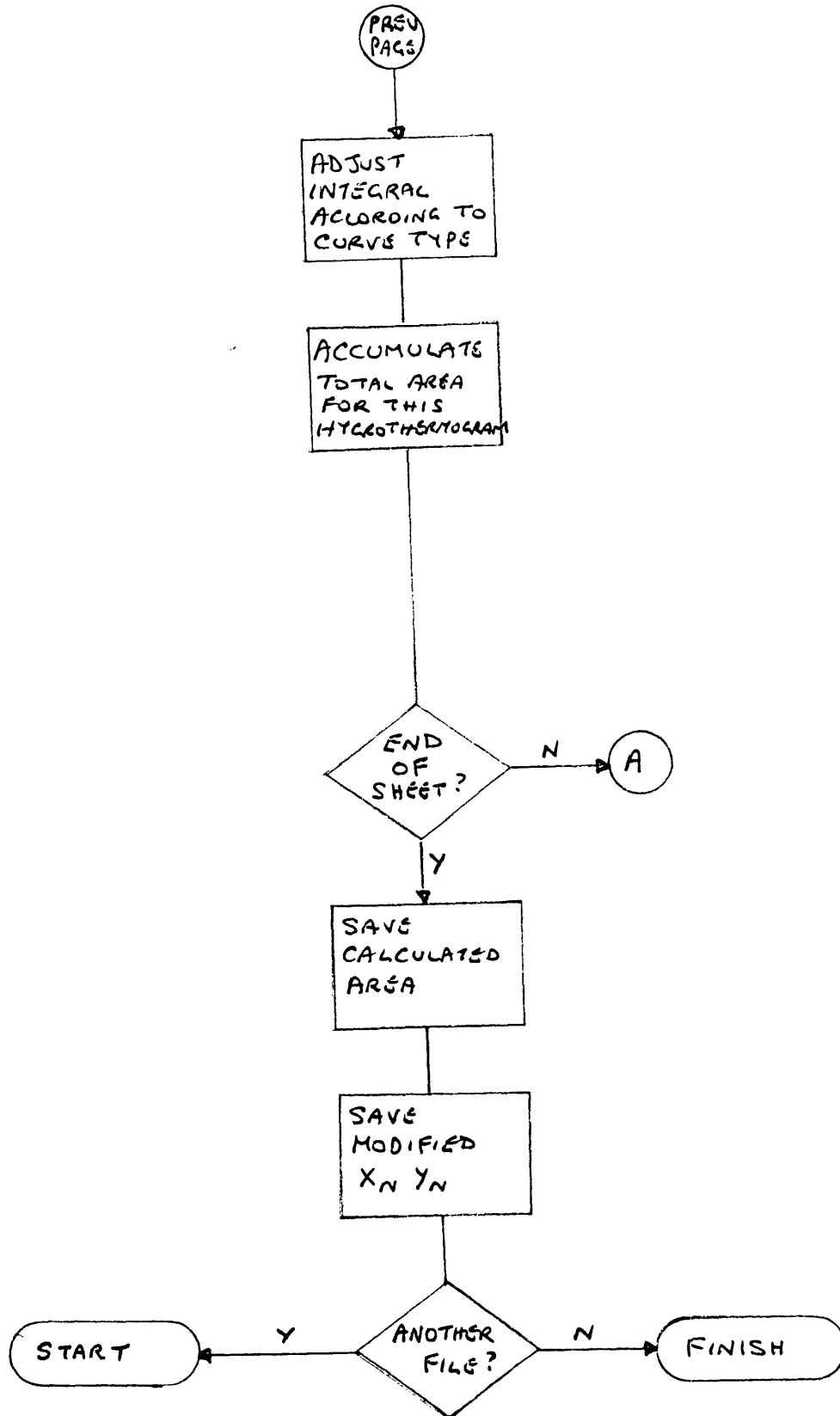
APPENDIX II Logic flow charts for selected programs developed during the course of the data processing required for this project.

The documented programs and their brief descriptions are as follows:

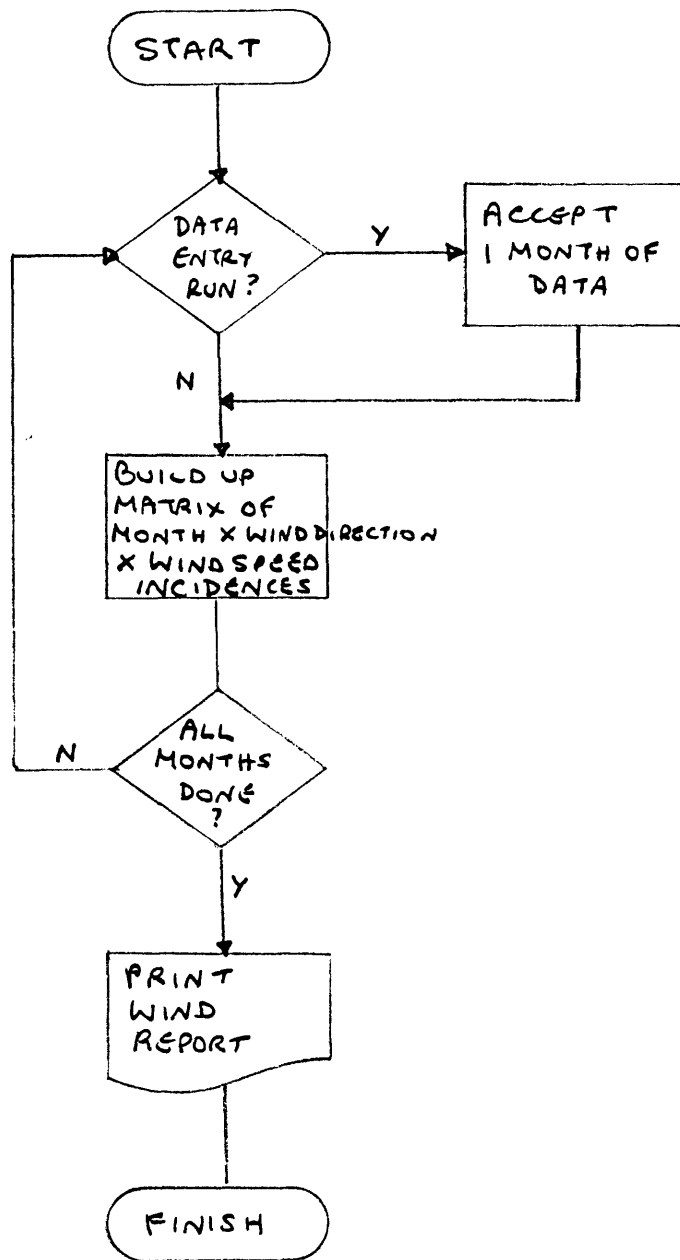
- THGTRANSPOSE Takes for input files of digitised thermohygrograms for both temperature and relative humidity. The program eliminates duplicate data points, recognises and repositions digitising error points, calculates the "area" under the graph and saves the results. This routine has a built in capacity to adjust the humidity data in line with a known correction factor for a wrongly calibrated thg to the correct values,
- SVPANDVPD Reads all the temp.dat and humid.dat files created by THGTRANSPOSE and first calculates the saturation vapour pressure for each relative humidity. It obtains the correct temperature values by an interpolation procedure that assumes a linear progression between successive points. The program then calculates the vapour pressure deficit for each SVP. These VPD values are then averaged for each month.
- WINDIN Reads all the wind data from the Meteorological Bureau and stores them into a month x wind direction x wind speed array.
- SUNMAP Maps the hours of exposure to direct sunlight of grid cells in a digitised landscape. This program reads the input data for each cell and, after calculating the hours of exposure which have been adjusted by the landscape and cloud cover, writes an updated file to be used for modelling vegetation associations, vegetation structure, and boundary distribution.

- CROWNDENS** Reads the all the canopy files and mid-layer files. It calculates the space required for each crown within each area and combining this packing density with factorised species crown densities, the program arrives at a single figure which rates the amount of light reaching the understorey layer.
- TREGRO** Simulates growth and succession in the transitional forest community. Species growth rates are calculated according to their own capacity to grow in conjunction with the site environmental conditions which includes the impact of shading by taller plants. The simulator runs for an optional number of "years" while an optional number of repetitions establishes a mean result. The simulator can start from bare ground, grow on an existing stand or be used to evaluate community response to perturbations.
- CLUANVAL** Uses the probability predictions developed during the modelling stage of the analysis for each species. The program examines a cluster analysis performed by PATN which was derived from predicted species probabilities for a range of environments. It uses the 95% confidence limits for the predicted probabilities to determine at what branches in the cluster analysis there is, in reality, insufficient certainty to accept the branch. The objective is to overcome the fundamental problems with cluster analyses which are that they continue until a stopping rule is met or until all objects have been clustered.

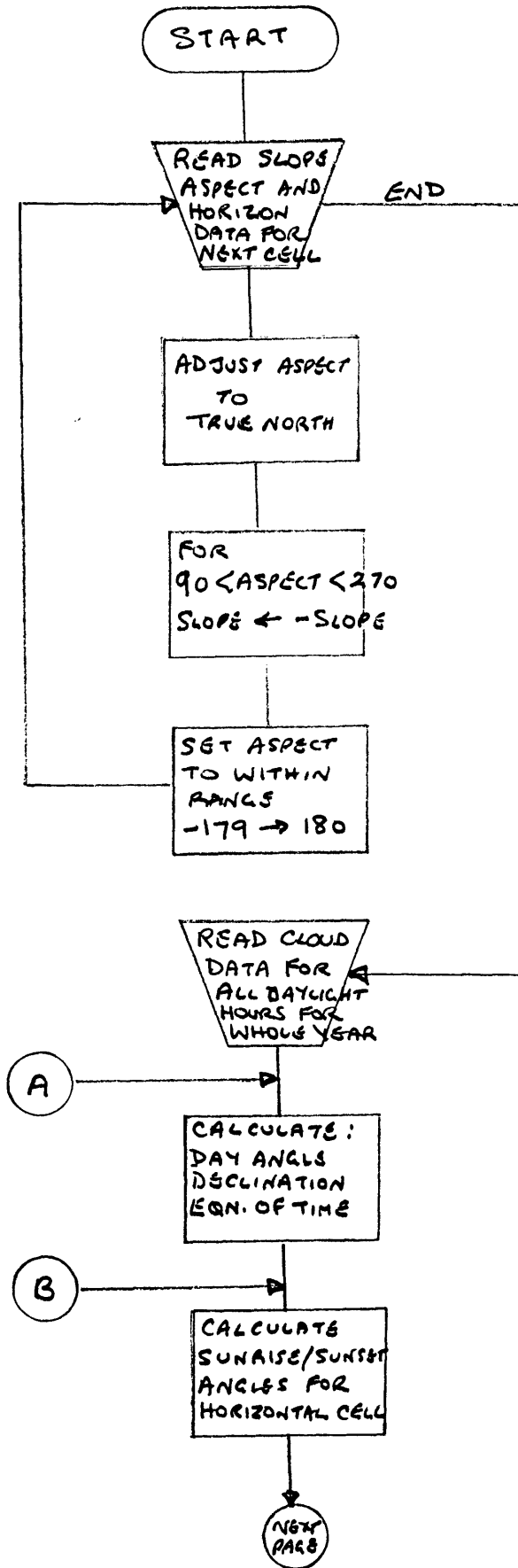




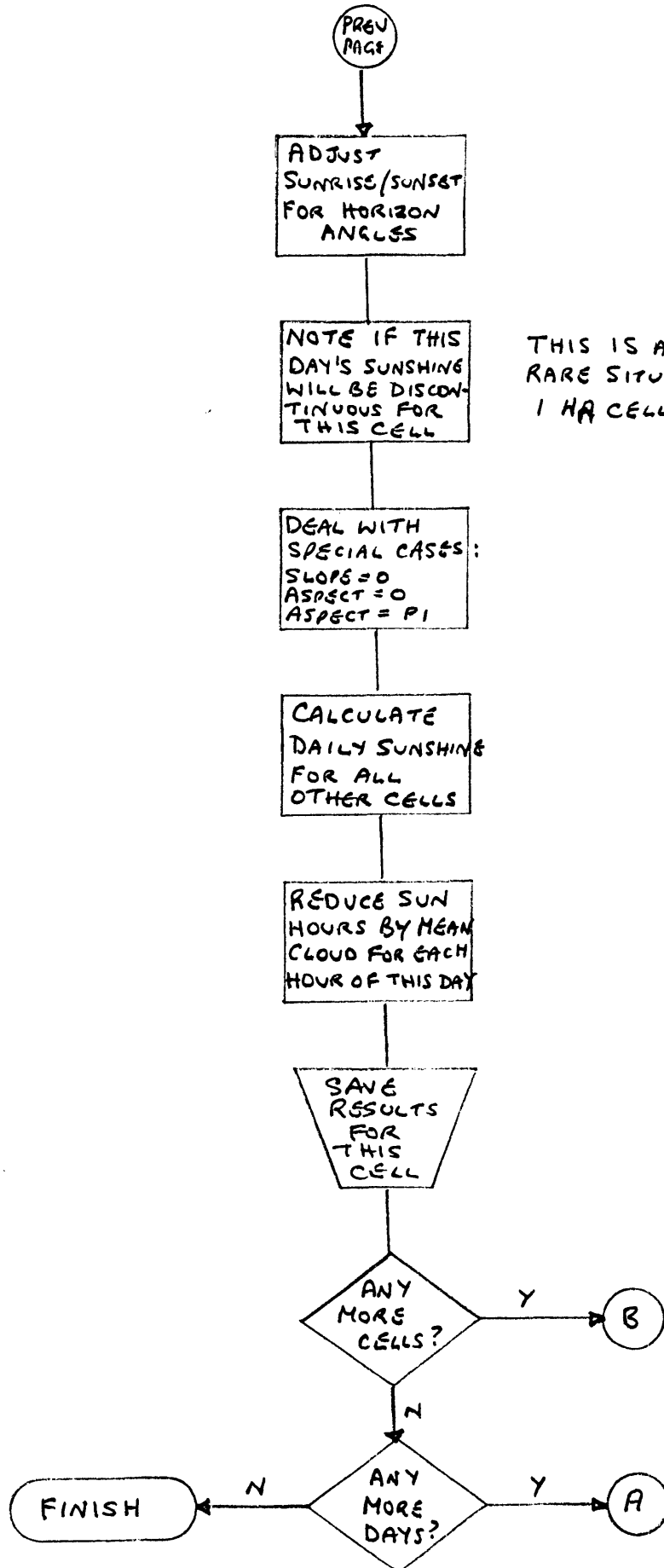
THGTRANPOSE



WINDIN

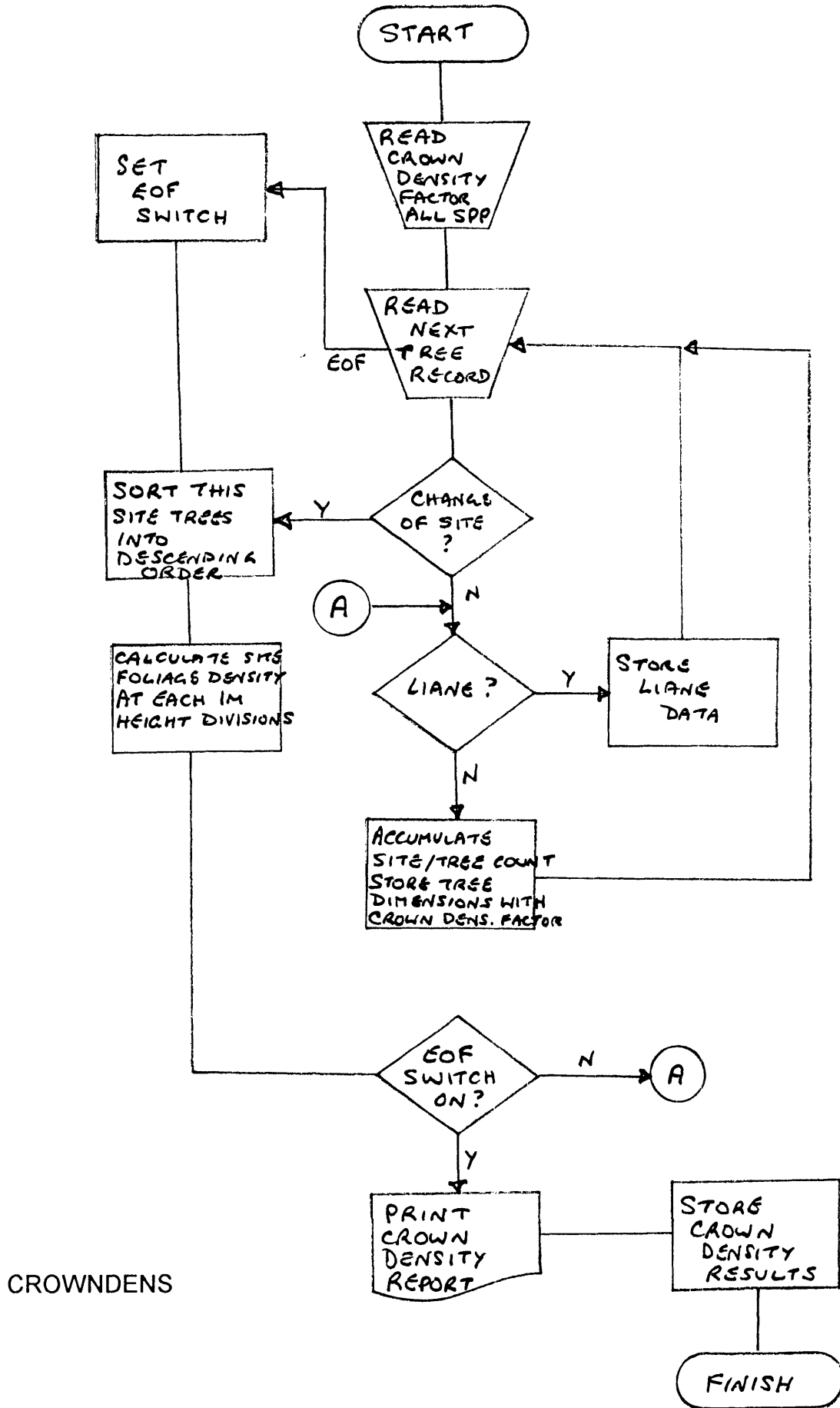


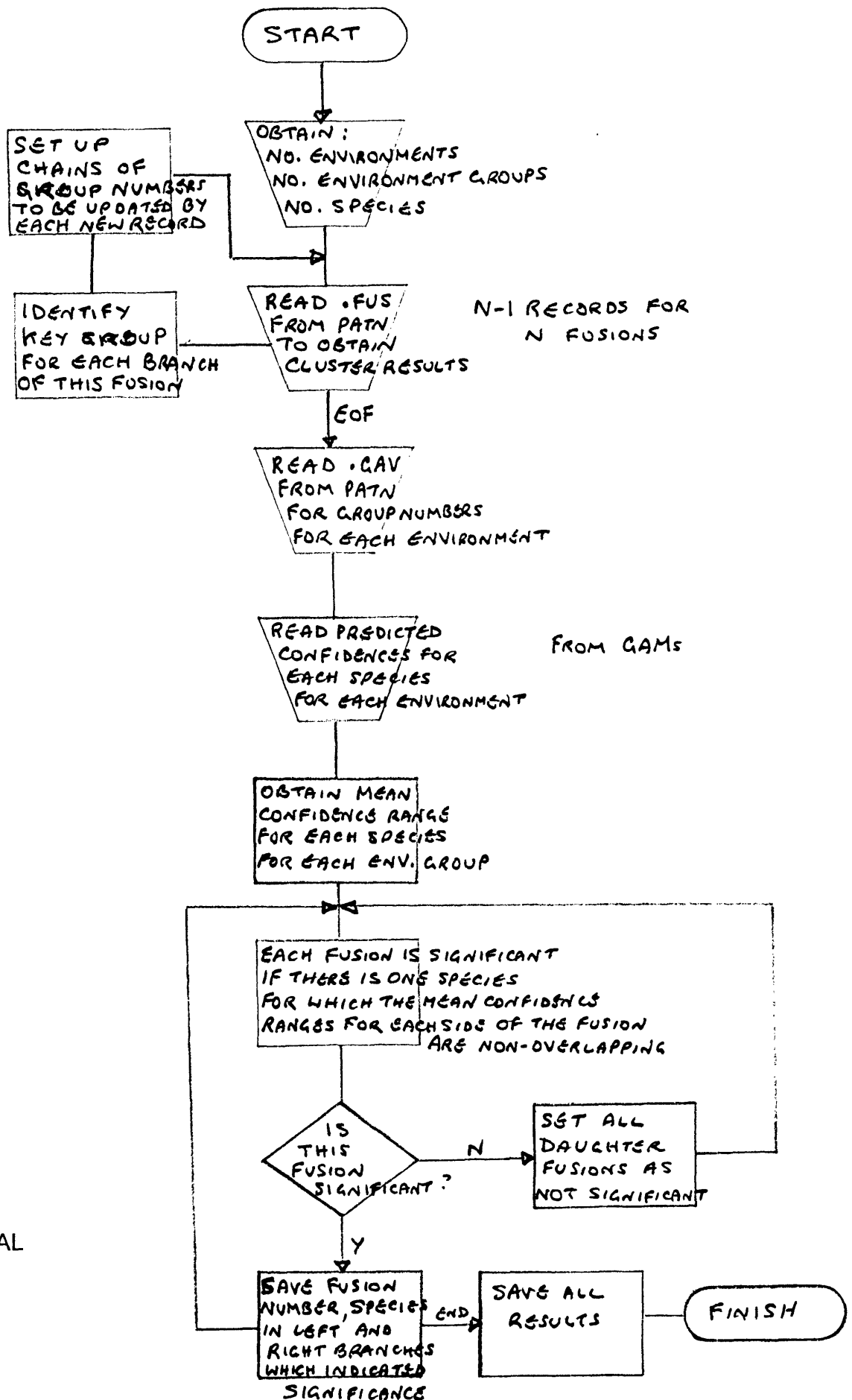
SUNMAP

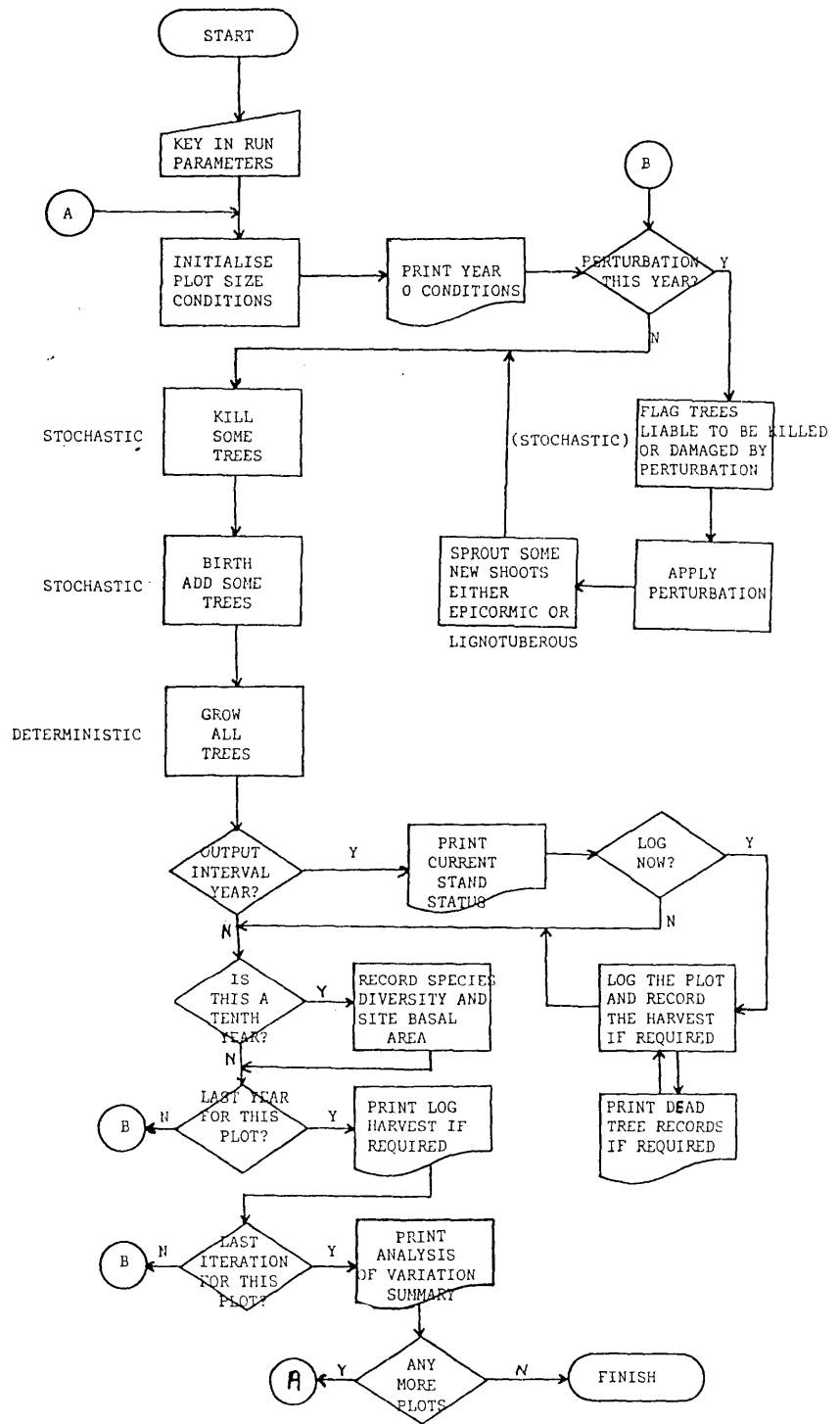


THIS IS AN EXTREMELY RARE SITUATION FOR 1 HA CELLS

SUNMAP







TREGRO