APPENDIX A

REPORT ON AGE OF BASALT FROM 12 KM NW OF ARMIDALE

The Australian
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Laboratories

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In reply quote:

amdel

NATA CERTIFICATE

4/194/0 - AC 2489/81

13 January 1981

The University of New England,
Department of Geography,
ARMIDALE, NSW 2350

Attention: Mark Connolly

REPORT AC 2489/81

YOUR REFERENCE:	Letter dated 3 November 1980
IDENTIFICATION:	As listed
DATE RECEIVED:	7 November 1980

D.K. Rowley
Manager
Analytical Chemistry Division

[redacted]

for Norton Jackson
Managing Director

mhb

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GEOCHRONOLOGY REPORT

Sample No. 111 showed slight alteration and contained carbonate minerals which made it unsuitable for K-Ar dating.

Sample No. 222 was suitable for dating and the analysis is reported below. The result indicates a late Oligocene age.

Sample No:	222 Total Rock
%K:	1.845 1.835 1.855
$^{40}Ar^*$:	0.81032 $x10^{-10}$ moles/g
$^{40}Ar^*/^{40}Ar$ total:	0.921
Age:	$25.1\pm0.1x10^6$y

*Denotes radiogenic argon
Analytical error is 1% (standard deviation)

Constants used: $^{40}K/K = 1.167x10^{-4}$ mol./mol.

$\lambda_\beta = 4.962 \times 10^{-10}\ y^{-1}$

$\lambda_\varepsilon = 0.5811 \times 10^{-10}\ y^{-1}$

(Sample 222 from GR 615333, Dumaresq 1:25,000 sheet)
M.C.

APPENDIX B

GEOLOGICAL TIME TABLE

ERA	PERIOD	EPOCH	MY BP
CAINOZOIC	QUATERNARY	Holocene	0.01-0.0
		Pleistocene	1.8-0.01
	TERTIARY	Pliocene	5-1.8
		Miocene	22.5-5.0
		Oligocene	37.5-22.5
		Eocene	55-37.5
		Palaeocene	65-55
MESOZOIC	CRETACEOUS		141-65
	JURASSIC		195-141
	TRIASSIC		230-195
PALAEOZOIC	PERMIAN		280-230
	CARBONIFEROUS		345-280
	DEVONIAN		395-345
	SILURIAN		435-395
	ORDOVICIAN		500-435
	CAMBRIAN		570-500
PRECAMBRIAN			Pre 570

(After Van Eysinga, 1978)

APPENDIX C

REPORT ON AGE OF BASALT FROM PADDY'S PLAINS, DORRIGO

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16 December 1982

GS 4/194/0

University of New England,
Geography Department,
ARMIDALE, NSW 2351.

Attention: Prof. C.D. Ollier

REPORT GS 3470/82 - FINAL

YOUR REFERENCE: Letters dated 7 October 1982 and 8 November 1982

MATERIAL: Basalt

LOCALITY: New England

IDENTIFICATION: Platypus Creek, Paddy's Plain

DATE RECEIVED: 8 November 1982

WORK REQUIRED: K-Ar geochronology

Investigation and Report by: Dr Alan Webb

Chief - Geological Services Section: Dr Keith J. Henley
Manager, Mineral and Materials Sciences Division: Dr William G. Spencer

[redacted]

for Norton Jackson
Managing Director

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K-Ar GEOCHRONOLOGY OF BASALT

1. INTRODUCTION

Two samples of basalt were received during October and November from Prof. C.D. Ollier, University of New England, with a request for K-Ar geochronology. One sample remained to be dated from a job commenced and pre-paid in December 1981.

2. PROCEDURES

Thin sections were prepared and examined to evaluate the suitability of the basalts for K-Ar dating. The Platypus Creek sample was too altered to be expected to give a reliable K-Ar age but the Paddy's Plain sample, although showing some patchy discoloration with slight alteration, was considered fresh enough to produce an acceptable result.

The sample was crushed and representative fractions screened out for K and Ar analysis.

3. RESULTS

The K-Ar analyses and age are as follows:

Sample	% K	$^{40}Ar^{*}$ ($\times 10^{-10}$ moles/g)	$^{40}Ar^{*}/^{40}Ar$ Total	Age ($\times 10^{6}$y)
Paddy's Plain	2.110	0.70491	0.863	19.1±0.2
(Total Rock)	2.121			

* Denotes radiogenic Ar. Error is 1 Standard Deviation.

Constants used:

$$^{40}K/K = 1.167 \times 10^{-4} \text{ mol/mol}$$
$$\lambda\beta = 4.962 \times 10^{-10}\text{y}^{-1}$$
$$\lambda\varepsilon = 0.581 \times 10^{-10}\text{y}^{-1}$$

The age of 19 Ma is in close agreement with the expected age for the youngest basalts in this area.

APPENDIX D

REPORT ON AGE OF GABBRO FROM THE CRESCENT, POINT LOOKOUT

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In reply quote:

amdel

21st July, 1982.

GS 4/194/0

The University of New England,
Department of Geography,
ARMIDALE NSW 2351

Attention: Prof. C.D. Ollier

REPORT CS 3470/82 PART II

YOUR REFERENCE: Letter 7th June, 1982.

MATERIAL: One rock

LOCALITY: The Crescent, New England National Park

DATE RECEIVED: 11th June, 1982.

WORK REQUIRED: K-Ar Geochronology

Investigation and Report by: Mark Fanning

Chief - Geological Services Section: Dr. Keith J. Henley
Manager, Mineral and Materials Sciences Division: Dr. William G. Spencer

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Acting Chief
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K-AR GEOCHRONOLOGY

1. INTRODUCTION AND PROCEDURES

One sample was received from the University of New England, Department of Geography with a request for total rock K-Ar geochronology.

A representative thin section was cut and the sample was examined with regard to suitability for total rock geochronology.

Standard procedures were used for the determination of potassium content and for the extraction and isotopic analysis of the argon.

Results are presented in the attached report sheet.

K-AR GEOCHRONOLOGY REPORT

Constants: $^{40}K = 0.01167$ atom%; $\lambda_\beta = 4.962 \times 10^{-10}y^{-1}$; $\lambda_\varepsilon = 0.5811 \times 10^{-10}y^{-1}$

Sample	%K	$^{40}Ar^*$ (x 10^{-10} moles/g)	$^{40}Ar^*/^{40}Ar$ total	Age (x 10^6y)
ıbbro total rock	0.336 0.336	0.3129	0.556	52.9 ±0.5

PETROGRAPHY:

Hand Specimen:

This is a coarse grained igneous rock consisting mostly of multiply twinned plagioclase crystals, of the order of 1-2 cm in length, with lesser amounts of ferromagnesian minerals. The rock is fresh in hand specimen and there does not appear to be any preferred orientation of minerals.

Thin Section:

Coarse grained multiply twinned plagioclase crystals that range up to 2 cm in length, comprise approximately 90% of this rock. The plagioclase is of a labradorite composition and shows minimal alteration.

The ferromagnesian phases occupy the interstices between the partly interlocking plagioclase crystals. Olivine is more prevalent (∿5%) than orthopyroxene (∿3%) with smaller amounts of biotite and opaques.

Minor secondary alteration is found at the margins of a number of the ferromagnesian minerals, orthopyroxene and biotite the most affected. Secondary minerals include sericite, fine grained clays and ? chlorite. Traces of carbonate are also present.

The rock is considered suitable for total rock K-Ar geochronology as the dominant phases present appear little altered. The minor amount of alteration present is typically interstitial and entrapped between interlocking crystalline phases.

INTERPRETATION:

The calculated Early Eocene age (52.9 ±0.5) is neither consistent with the proposed association with the "Dorrigo Volcanics" (c.a. 18-19 Ma, Wellman and McDougall, 1974 Table VII and Fig. 3), nor the Permian "Crescent Complex".

The rock has a moderate but small potassium content and it seems unlikely that inherited argon could be invoked to explain the anomalously old age (i.e. assuming the Dorrigo Volcanic association). Alternatively the sample appears fresh and unaltered, with no evidence of deformation, which suggests that argon loss may not be the explanation for an anomalously young age (i.e. assuming the Permain association).

On the basis of the single calculated age very little geological inference can be placed, and the paucity of published geochronological information in the area inhibits any regional correlation. It would be necessary to carry out further analyses on associated rocks in order to assess the geological significance of this calculated Early Eocene age. The Early Tertiary was a time of changing plate movements in the Tasman Sea and Southern Ocean.

REFERENCE

Wellman, P. and McDougall, I., 1974. Potassium-argon ages on the Cainozoic volcanic rocks of New South Wales. J. Geol. Soc. Aust., 21 : 247-272.

APPENDIX E

NOTE ON AGES OF WEATHERED PROFILES IN THE ARMIDALE-URALLA REGION

CSIRO

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5 Jan., 1983

Dear Cliff,

Herewith is a summary of the results from the weathered profiles. As you see the only samples to behave in a consistent manner are those from site 10 (+ 8(?), and 2a, 3b, the latter appearing to be fairly young (late Tert./recent). The stereonet shows the directions approaching lower-middle Jurassic directions but wander off at the last two steps. The fact that they wander off in the same direction may be significant and may indicate the presence of reversals but I would want to repeat the results to confirm it. However since the directions do not eventually stabilise it is not possible to definitely fix the age. These results (10) are promising and if follow up work is to be carried out I suggest it be concentrated on the Sugarloaf. Also samples of basalt might provide support of a Jurassic age. If Mark wants further work done I'll send a sun-compass so he can orient about ten blocks of fukarite and about the same of basalts - actually a few samples of basalt from all suspected 'old' outcrops might be of most use as far as the basalts go. Regards to family and Mark. Look forward to seeing you in Canberra next month.

Best wishes,

Phil

(P.W. Schmidt)

SITE		COMMENTS	MOST STABLE DIRECTIONS
NE01	Martin's Gully	Intensity strong, scattered	94/63, 338/12
02	" "	mod-weak intensity, soft	13/-63 (SSCS), [redacted]
03	Bald Knobs	int moderate (10-100), well-defined	139/-60, 7/-66
04	Arthur's Seat	int. weak scattered multi-components	
05	" "	strong (1000-2000) scattered	73/1, 74/60
06	" "	one sample mod. int	57/-65
07	McGarrity's	soft, multi-component	
08	Mt Butler Sth	strong-mod. int., scattered	155/58, 183/5
09	Richleigh Hill	"	194/17, 235/3
10	The Sugarloaf	" , partially cleaned	150/41, 138/[illegible]
11	Uralla Trig.	strong, scattered	178/-7, 354/44
12	Madjwick Dve.	one sample, mod. int.	91/16

NOTES:

1/ 8b, 10a and 10b samples show similar directions, but ortho plots reveal only partially cleaned. (also stereos - ie no stable end points). Extrapolating (speculating) underlying dirn of these might be SE, steep down - early/mid Jurassic. High temp dirn samples 10a & b do not appear to be norm, evidence of mixed polarities?

2/ Other samples showing similarities 2a, 3b directions close to present field. (?)

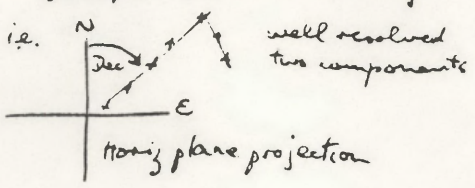
3/ High intensities might reflect lightning strikes nearby.

4/ Data too poor to enable age estimates - possible complex chemical histories of profiles responsible (also lightning?). Most of the results could be explained in terms of forming over long period, involving field reversal or two - but no independent evidence of this except site 10; 650°C directions steep -ve, while others +ve inclinations.

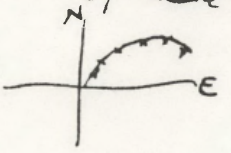
Orthogonal plots

straight lines evidence of one component being removed, curved evidence of more than one.

i.e.



well resolved two components



overlapped two components

(site 10 is of this kind so the final direction not quite resolved)

ortho plots are combination of vector projections onto the horizontal plane (N-S, E-W) and the vertical plane (UP-DOWN, N-S OR E-W)

+ refer to former, O refer to latter.

APPENDIX F

EXTINCTION/INCLUSION CHARACTERISTICS FOR QUARTZ GRAINS IN SELECTED SILCRETES AND FERRICRETES IN THE ARMIDALE-URALLA REGION

	a	b	c	d
1	8 / 6			85 / 45
2	2 / 0		0 / 1	8 / 26
3	0 / 1			0 / 2
4				
5				
6				0 / 1

Sample 135: Ferricrete
Matrix n=103; Glaeb. n=82

	a	b	c	d
1	13 / 17	3 / 1		9 / 44
2	12 / 9	1 / 0	4 / 0	59 / 39
3				1 / 0
4				2 / 0
5				1 / 0
6				

Sample 145: Ferricrete
Matrix n=105; Glaeb.n=110

	a	b	c	d
1	3 / 0		3 / 1	100 / 104
2				
3				
4				
5				
6				

Sample 286: Ferricrete
Matrix n=106; Glaeb.n=105

	a	b	c	d
1	7			19
2	28			35
3				
4				
5				
6				1

Sample 130: Ferricrete
Glaebule n=88

	a	b	c	d
1	33			42
2	10	1	1	18
3				3
4				
5				
6				

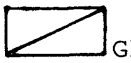
Sample 289: Silcrete
n=108

	a	b	c	d
1	8			90
2				3
3				
4				
5				
6				2

Sample 280: Silcrete
n=103

	a	b	c	d
1	40 / 5			19 / 7
2	34 / 36			1 / 48
3	2 / 1			3 / 8
4	1 / 0			2 / 0
5				2 / 0
6	5 / 0			2 / 0

Sample 056: Silcrete with Ferricrete glaebules.
Matrix n=111; Glaeb.n=84

Matrix  Glaebule

KEY

1 Single grain, straight extinction

2 Single grain, slightly undulose extinction

3 Single grain, strongly undulose extinction

4 Semicomposite grain, straight to slightly undulose extinction

5 Composite grain, straight to slightly undulose extinction

6 Composite grain, stringly undulose extinction

a Abundant fluid inclusions

b Rutile needles and other hair-like intrusions

c Microlites

d Few fluid inclusions, no microlites

(Classification after Folk, 1968)

REFERENCES

Alley, N.F. (1977a)
Age and origin of laterite and silcrete duricrusts and their relationship to episodic tectonism in the mid-north of South Australia, J. geol. Soc. Aust., 2, 107-116.

Alley, N.F. (1977b)
Discussion: age and origin of laterite and silcrete duricrusts and their relationship to episodic tectonism in thes mid-north of South Australia, J. geol. Soc. Aust., 24, 421-425.

American Geological Institute (1976)
Dictionary of Geological Terms, Anchor Books, New York.

Andrews, E.C. (1903)
An outline of the Tertiary history of New England, Rec. Geol. Surv. N.S.W., 7, 140-216.

Andrews, E.C. (1904)
The geology of the New England plateau, with special references to the granites of northern New England, Pt 1: Physiography, Rec. Geol. Surv. N.S.W., 7, 281-300.

Andrews, E.C. (1910)
Geographical unity of eastern Australia in late and post Tertiary time, J. Proc. Roy. Soc. N.S.W., 67, 251-350.

Andrews, E.C. (1912)
Notes on a model of New England and associated topographic forms, J. Proc. Roy. Soc. N.S.W., 46, 143-154.

Barnes, V.E. and Barnes, M.A. (eds) (1973)
Tektites, (Benchmark papers in geology) Dowden, Hutchinson and Ross, Stroudsburg, Penn.

Bayliss, P. and Loughnan, F.C. (1963)
Mineralogical evidence for the penecontemporaneous lateritization of the basalts from New England, N.S.W., The American Mineralogist, 48, 410-414.

Bevan, J.R. (1970)
The Dumaresq Creek catchment above Armidale - a water balance and sediment transport study, Unpubl. M.Sc. thesis, University of New England, Armidale, N.S.W.

Binns, R.A. and Richards, J.R. (1965)
Regional metamorphic rocks of Permian age from the New England district of N.S.W., Aust. J. Sc., 27, 233.

Bird, E.C.F. (1968)
Coasts, M.I.T. Press, Cambridge, Mass.

Birot, P. (1968)
The Cycle of Erosion in Different Climates (Translated by C.I. Jackson and K.M. Clayton), Batsford, London.

Bishop, P. (1982)
Stability or change: a review of ideas on ancient drainage in eastern New South Wales, Aust. Geogr., 15, 219-230.

Bishop, P. and Young, R.W. (1980)
Discussion: On the Cainozoic uplift of the southeastern Australian highland, J. geol. Soc. Aust., 27, 117-119.

Bowler, J.M. (1973)
Clay dunes: their occurrence, formation and environmental significance, Earth-Sci. Rev., 9, 315-338.

Bowler, J.M. (1975)
Deglacial events in southern Australia: their age, nature, and palaeoclimatic significance, Bull. Roy. Soc. N.Z., 13, 75-82.

Brewer, R. (1964)
Fabric and Mineral Analysis of Soil, Wiley,New York.

Brown, C.M. (1983)
Discussion: a Cainozoic history of Australia's southeast highlands, J. geol. Soc. Aust., 30, 483-486.

Brown, M.C. (1983)
Discussion: origin of coastal lowlands near Ulladulla, New South Wales, J. geol. Soc. Aust., 30, 247-248.

Browne, W.R. (1969)
Geomorphology of New South Wales, J. geol. Soc. Aust., 16, 559-569.

Browne, W.R. (1972)
Greybilly and its associates in eastern Australia, Proc. Linn. Soc. N.S.W., 97, 98-129.

Browne, W.R., Dulhunty, J.A. and Maze, W.H. (1944)
The Kosiusko district, Proc. Linn. Soc. N.S.W., 69, 238-52.

Brownlow, J.W. (1982)
Diapirism and the development of four thermal provinces in northeastern New South Wales, in Flood, P.G. and Runnegar, B. (1982) op. cit., 229-237.

Bureau of Mineral Resources (1979)
Earth Science Atlas ('Geology' and 'Structural Elements' maps), Bureau of Mineral Resources, Canberra

Carrol, D. (1951)
Mineralogy of laterites, Aust. J. Sc., 14, 41-42.

Chorley, R.J. (1962)
Geomorphology and general systems theory, US Geol. Surv. Prof. Pap., 500(B).

Chorley, R.J., Beckinsale, R.P. and Dunn, A.J. (1973)
The History of the Study of Landforms, Volume Two: The Life and Work of William Morris Davis, Methuen, London.

Christofoletti, A. (1974)
The explanatory finality of geomorphology, Recent Researches in Geology, 2, 1-5, Department of Geology, University of Delhi, Delhi.

Clark, M.J., Lewin, J. and Small, R.J. (1967)
The sarsen stones of the Marlborough Downs and their geomorphological implications, Southhampton Research Series in Geography, 4, 3-40.

Cooper, J.A., Richards, J.R. and Webb, A.W. (1963)
Some Potassium-argon ages in New England, N.S.W., J. geol. Soc. Aust., 10, 313-316.

Cotton, L.A. (1909)
Note on the Guyra lagoon, Proc. Linn. Soc. N.S.W., 34, 233-237.

Coventry, R.J., Taylor, R.M. and Fitzpatrick, R.W. (1983)
Pedological significance of the gravels in some red and grey earths of central north Queensland, Aust. J. Soil Res., 21, 219-240.

Craft, F.A. (1933)
The coastal tablelands and streams of New South Wales, Proc. Linn. Soc. N.S.W., 58, 437-560.

Craig, J.R. and Vaughan, D.J. (1981)
Ore Microscopy and Ore Petrography, Wiley, New York.

Crickmay, C.H. (1974)
The Work of the River, Macmillan, Londin.

Crohn, P.W. (1949)
The geology, petrology and physiography of the Omeo district, northeastern Victoria, Proc. Roy. Soc. Vic., 62, 1-70.

Crohn, P.W. (1979)
Discussion: On the Cainozoic uplift of the southeastern Australian highland, J. geol. Soc. Aust., 26, 318.

Cronk, D.J. (1972)
The basalts between Armidale and Kellys Plains, Unpubl. Geol. III Project No. 260, University of New England, Armidale, N.S.W.

Dalrymple, G.B. (1977)
Critical tables for conversion of K-Ar ages from old to new constants, Geology, 7, 558-560.

Darwin, C. (1844)
Geological observations on the Volcanic Islands and parts of South America visited during the voyage of H.M.S. Beagle, Republished by Appleton, New York (cited in Barnes, V.E. and Barnes, M.A. (1973) op. cit.).

David, T.W.E. (1886)
Report on the Rocky River and Uralla goldfield, N.S.W. Dept of Mines Ann. Rep. 1886, 153-158.

David, T.W.E. (1887)
Geology of the Vegetable Creek district, Mem. Geol. Surv. N.S.W., 1.

David, T.W.E. (1902)
An important geological fault at Kurrajong Heights, New South Wales, J. Proc. Roy. Soc. N.S.W., 36, 359-370.

David, T.W.E. (1950)
The Geology of the Commonwealth of Australia (Two volumes, edited by W.R. Browne), Edward Arnold, London.

Davies J.L. and Williams, M.A.J. (eds) (1978)
Landform Evolution in Australasia, ANU Press, Canberra.

Derbyshire, E. (ed.) (1976)
Geomorphology and Climate, Wiley, London.

Douglas, I. (1964)
Intensity and periodicity in denudation processes with special reference to the removal of material in solution by rivers, Z. Geomorph, 8, 451-473.

Douglas, I. (1967)
Man, vegetation and the sediment yields of rivers, Nature, 215, 925-928.

Douglas, I. (1970)
Sediment yields from forested and agricultural lands, in Taylor, J.A. (ed.) (1970) The Role of Water in Agriculture Pergamon, Oxford, 57-88.

Douglas, I. (1977)
Humid Landforms, A.N.U. Press, Canberra.

Du Bois, C.G.B. and Jeffery, P.G. (1955)
Laterites on Entebbe Peninsular, Colon. Geol. Miner. Resour., 5, 387-408 (Cited in McFarlane, M.J. (1976) op. cit.).

Du Preez, J.W. (1949)
Laterite: a general discussion with a description of Nigerian occurrences, Bull. Agric. Congo Belge, 40, 53-66 (Quoted in Thomas, M.F. (1974) op. cit.).

Dulhunty, J.A. (1972)
Potassium-Argon basalt dates and their significance in the Ilford-Mudgee-Gulgong region, J. Proc. Roy. Soc. N.S.W., 105, 39-44.

Dury, G.H. and Knox, J.C. (1971)
Duricrusts and deep-weathering profiles in southwest Wisconsin, Science, 174, 291-292.

Evernden, J.F. and Richards, J.R. (1962)
Potassium-Argon ages in eastern Australia, J. geol. Soc. Aust., 9,1-49.

Exon, N.F., Langford-Smith, T. and McDougall, I. (1970)
The age and geomorphic correlations of deep weathering profiles, silcrete and basalt in the Roma-Amby region, Queensland, J. geol. Soc. Aust., 17, 21-30.

Fairbridge, R.W. and Finkl, C.W. (Jr) (1978)
Geomorphic analysis of the rifted cratonic margins of southwestern Australia, Z. Geomorph. N.F., 22, 369-389.

Fairbridge, R.W. and Finkl, C.W. (Jr) (1980)
Cratonic erosional uncomformities and peneplains, J. Geol., 88, 69-86.

Field, J.B. (1983)
The sources of solutes in, and chemical budgets for three small rural catchments in New England, N.S.W., Unpubl. Ph.D. thesis, University of New England, Armidale, N.S.W.

Finkl, C.W. (1982)
On the geomorphic stability of cratonic planation surfaces, Z. Geomorph., 26, 137-150.

Finkl, C.W. (Jr) (1979)
Stripped (etched) landsurfaces in southern Western Australia, Aust. Geog. Stud., 17, 33-52.

Finkl, C.W. (Jr) and Fairbridge, R.W. (1979)
Palaeogeographic evolution of a rifted cratonic margin: SW Australia, Palaeogr., Palaeoclimatol., Palaeoecol., 26, 221-252.

Flood, P.G. and Runnegar, B. (eds) (1982)
New England Geology (Proceedings of a symposium in honour of A.H. Voisey), Dept of Geology, University of New England and AHV Club, Armidale, N.S.W.

Folk, R.L. (1968)
Petrology of Sedimentary Rocks, Hemphills, Austin (Texas).

Folk, R.L. and Ward, W.C. (1957)
Brazos River Bar: a study in the significance of grain size parameters, J. Sed. Petrol., 27, 3-26.

Folster, H. (1969)
Slope development in SW-Nigeria during late Pleistocene and Holocene, Beitrage zur Geomorphologie der wechselfeuchten Tropen, 20, 3-56.

Francis, G. and Walker, G.T. (1978a)
Multiple laterite surfaces near Armidale, Search, 9, 191-192.

Francis, G. and Walker, G.T. (1978b)
Silcretes of subaerial origin in southern New England, Search, 9, 8-9, 321-323.

Francis, G., Douglas, I, and Walker, G.T. (1979)
Landform longevity in southeastern Australia, Unpubl. MS.

Frankel, J.J. and Bayliss, P. (1966)
Ferruginised surface deposits from Natal and Zululand, South Africa, J. Sed. Petrol., 36, 193-201.

French, W.J. (1875)
Letter to the Editor, The Armidale Express July 23rd, 1875, 4.

Galloway, R.W. (1967)
Pre-basalt, sub-basalt and post-basalt surfaces of the Hunter Valley, New South Wales, in Jennings, J.N. and Mabbutt, J.A. (1967) op. cit..

Gardner, W. (1854)
Characteristic [sic] of the Uralla or Rocky River gold field at Mounts Jones and Welch [sic], Productions and Resources of the Northern and Western Districts of N.S.W., 1, 1854 (Mitchell Library Manuscript ML A176-1).

Goudie, A. (1973)
Duricrusts in Tropical and Subtropical Landscapes, Oxford Research Studies in Geography. Oxford University Press, London.

Goudie, A.S. and Pye, K. (eds) (1983)
Chemical Sediments and Geomorphology, Academic Press, London.

Green, J. and Short, N.M. (eds) (1971)
Volcanic Landforms and Surface Features, Springer-Verlag, New York.

Griffin, T.J. and McDougall, I. (1975)
Geochronology of the Cainozoic McBride Volcanic Province, Northern Queensland, J. geol. Soc. Aust., 22, 387-396.

Grimes, K.G. (1980)
The Tertiary geology of north Queensland, in Henderson, R.A. and Stephenson, P.J. Geology and Geophysics of Northeastern Australia,, Geological Society of Australia, Queensland Division, Brisbane, 329-347.

Harrington, H.J., Ellenor, D. and Matthias, I.G. (1971)
Geological report on M.E.L.A. 616, Armidale, Uralla and Walcha districts, Unpubl. report for Nickel Mines Ltd, Burwood, N.S.W.

Hayes, D.E. and Ringis, J. (1973)
Sea floor spreading in the Tasman Sea, Nature, 243, 454-458.

Herbert, C. (1980)
A tectonic origin for southeast Australian streams (abstract), in Truswell, E.M. and Abell, R.S. (1980) op. cit., 34-35.

Hills, E.S. (1975)
Physiography of Victoria, Whitcombe and Tombs, Melbourne.

Hughes, J.R. (1963)
A geologic investigation of some residual orthoquartzite boulders in the lower Eocene of Southwestern Union County, Mississippi, J. Sed. Petrol., 33, 53-63.

Hunt, P.A. Mitchell, P.B. and Paton, T.R. (1977)
'Laterite profiles' and 'laterite ironstones' on the Hawkesbury Sandstone, Australia, Geoderma, 19, 105-121.

Hutchings, S. (1981)
The soils of the Puddledock valley, New South Wales, Unpubl. B.A. (Hons) thesis, University of New England, Armidale, N.S.W.

Hutton, J.T. (1977)
Titanium and zirconium minerals, in Minerals in Soil Environments, Soil Science Society of America, Inc., Madison, Wisconson, 673-688.

Hutton, J.T., Twidale, C.R. and Milnes, A.R. (1978)
Characteristics and origin of some Australian silcretes, in Langford-Smith, T. (1978) op. cit., 19-39.

Idnurm, M. and Senior, B.R. (1978)
Palaeomagnetic ages of late Cretaceous and Tertiary weathered profiles in the Eromanga Basin, Queensland, Palaeogeogr., Palaeoclimatol., Palaeoecol., 24, 263-277.

Inman, D.L. (1952)
Measures for describing the size distribution of sediments, J. Sed. Petrol., 22, 125-145.

Jeans, D.N. (ed.) (1977)
Australia - a geography, Sydney University Press, Sydney.

Jennings, J.N and Mabbutt, J.A. (1967)
Landforms Studies from Australia and New Guinea, A.N.U. Press, Canberra.

Jennings, J.N. (1982)
Quaternary complications in fluviokarst at Cooleman Plain, N.S.W., Aust. Geogr., 15, 137-147.

Jones, J.G. and Veevers, J.J. (1980)
History of the southeast Australian highlands (abstract), in Truswell, E.M. and Abell, R.S. (1980) op. cit., 44.

Jones, J.G. and Veevers, J.J. (1982)
A Cainozoic history of Australia's southeast highlands, J. geol. Soc. Aust., 29, 1-12.

Jones J.G. and Veevers, J.J. (1983a)
Mesozoic origins and antecedents of Australia's eastern highlands, J. geol. Soc. Aust., 30, 305-322.

Jones, J.G. and Veevers, J.J. (1983b)
Reply: a Cainozoic history of Australia's southeast highlands, J. geol. Soc. Aust., 30, 487-488.

Jongsma, D. and Mutter, J.C. (1978)
Non axial breaching of a rift valley: evidence from the Lord Howe Rise and the southeastern Australian margin, Earth Planet. Sci. Lett., 39, 226-234.

Joyce, E.B. (1980)
Late Cainozoic volcanism in southeastern Australia; age, dis=trib=ution and tectonic setting (abstract), in Truswell, E.M. and Abell R.S. (1980) op. cit., 45.

Kennedy, W.Q. (1962)
Some theoretical factors in geomorphological analysis, Geol. Mag, 99, 304-312.

Kerr, P.F. (1977)
Optical Mineralogy (4th Ed.), McGraw-Hill, New York.

King, C.A.M. (1966)
Techniques in Geomorphology, Edward Arnold, London.

Korsch, R.J. (1977)
A framework for the Palaeozoic geology ofthe southern part of the New England Geosyncline, J. geol. Soc. Aust., 25, 339-355.

Korsch, R.J. (1978)
Petrographic variation within thick turbidite sequences: an example from the late Palaeozoic of eastern Australia., Sedimentology, 25, 247-265.

Korsch, R.J. (1980)
Geology of the Coffs Harbour district, in The Natural History of the Coffs Harbour District, Department of Continuing Education, University of New England, Armidale, N.S.W.,.

Korsch, R.J. (1982a)
Mount Duval: Geomorphology of a near-surface diapir, Z. Geomorph., 26, 151-162.

Korsch, R.J. (1982b)
The Dummy Creek Association: rim syncline deposits, J. Proc. Roy. Soc. N.S.W., 115, 13-19.

Korsch, R.J. and Harrington, H.J. (1981)
Stratigraphy and structural synthesis of the New England Orogen J. geol. Soc. Aust., 28, 205-226.

Krauskopf, K.B. (1967)
Introduction to Geochemistry, McGraw-Hill, New York.

Lam, K-C (1977)
Catastrophe theory and geomorphology, Paper presented at the Annual Conference, Institute of Australian Geographers, 1977, Armidale, N.S.W.

Lam, K-C (1979)
Production of runoff, solutes and sediments in a small catchment on the Northern Tablelands, New South Wales, Unpubl. Ph.D. thesis, University of New England, Armidale, N.S.W.

Lamplugh, G.W. (1902)
Calcrete, Geol. Mag., 9, 575.

Langford-Smith, T. (ed.) (1978)
Silcrete in Australia, Geography Department, University of New England, Armidale, N.S.W.

Langford-Smith, T. and Dury, G.H. (1965)
Distribution, character and attitude of the duricrust in the northwest of New South Wales and the adjacent areas of Queensland, Am. J. Sc., 263, 170-190.

Langford-Smith, T. and Watts, S.H. (1978)
The significance of coexisting siliceous and ferruginous weathering products at select Australian localities, in Langford-Smith, T. (1978) op cit., 143-165.

Leeder, M.R. (1976)
Discussion: The genesis of sub-basaltic silcretes from the Monaro, New South Wales, J. geol. Soc. Aust, 23, 113-114.

Leopold, L.B. and Langbein, W.B. (1962)
The concept of entropy in landscape evolution, US Geol. Surv. Prof. Pap. 500-A, 20.

Leopold, L.B., Wolman, M.G. and Miller, J.P. (1964)
Fluvial Processes in Geomorphology, Freeman and Co., San Francisco.

Longwell, C.R., Flint, R.F. and Sanders, J.E. (1969)
Physical Geography, Wiley, New York.

Loughran, R.J. (1969)
Fluvial erosion in five small catchments near Armidale, New South Wales, University of New England Research Series in Physical Geography, 1, 124pp.

Mackin, J.H. (1969)
Concept of the graded river, Bull. Geol. Soc. Am., 59, 463-512.

Macumber, P.G. (1978)
Evolution of the Murray River during the Tertiary Period - evidence from northern Victoria, Proc. R. Soc. Vic., 90, 43-52.

Maignien, R. (1958)
Le cuirassement des sols en Guinee, Mem. Carte Geol. Alsace-Lorraine, 16 (Cited in Ollier, C.D. (1976) op. cit.).

Mason, D. (1982)
Stratigraphy of western parts of the Barrington Tops Tertiary volcanic field, in Flood, P.G. and Runnegar, B. (1982) op. cit., 133-139.

McDougall, I. and Wilkinson, J.F.G. (1967)
Potassium-argon dates on some Cainozoic volcanic rocks from north eastern New South Wales, J. geol. Soc. Aust, 14, 225-234.

McFarlane, M.J. (1971)
Laterisation and landscape development in Kyagwe, Uganda, Q. J. Geol. Soc. Lond., 126, 501-539.

McFarlane, M.J. (1976)
Laterite and Landscape, Academic Press, London.

McFarlane, M.J. (1983)
Laterites, in Goudie, A.S. and Pye,K. (1983) op cit., 7-58.

McGowran, B., Rutland, R.W.R. and Twidale, C.R. (1977)
Discussion: Age and origin of laterite and silcrete duricrusts and their relationship to episodic tectonism in the mid-north of South Australia, J. geol. Soc. Aust, 24, 421-425.

Meade, R.H. (1969)
Errors in using modern stream-load data to estimate natural rates of denudation, Geol. Soc. Am. Bull., 80, 1264-1274.

Melhorn, W.N. and Flemal, R.C. (eds) (1975)
Theories of Landscape Development, Allen and Unwin, London.

Miall, A.D. (1977)
A review of the braided river depositional environment, Earth-Sci. Rev., 13, 1-62.

Milnes, A.R. (1980)
Laterite in South Australia (abstract), in Truswell, E.M. and Abell, R.S. (1980) op. cit., 53.

Milnes, A.R. and Twidale, C.R. (1983)
An overview of silicification in Cainozoic landscapes of arid central and southern Australia, Aust. J. Soil Res., 21, 387-410.

Mohr, E.C.J. (1933)
De Boden der tropen in het algemeen, en die van Nederlandsch-Indie in het bijzonder, Pt. 2, Kgl. Vereeniging Koloniaal Inst. Mededeel., 31, (Cited in Langford-Smith, T. and Dury, G.H. (1965) op. cit.).

Morisawa, M. (1968)
Streams: Their Dynamics and Morphology, McGraw-Hill, New York.

Moorhouse, W.W. (1959)
The Study of Rocks in Thin Section, Harper and Row, New York.

Moss, R.P. (1965)
Landforms and soils in tropical Africa, in African Studies Association of the United Kingdom, Symposium on Soil Resources of Tropical Africa, University College, London, 29th Sept., 1965.

Moss, R.P. (1973)
Landsurface development in the mid-north of South Australia, Trans. Roy. Soc. S. Aust., 97, 1-17.

Mulcahy, M.J. and Bettenay, E. (1971)
the nature of old landscapes, Search, 2, 433-434.

Mutter, J.C. and Jongsma, D. (1978)
The pattern of the pre-Tasman sea rift system and the geometry of breakup, Bull. Aust. Soc. Explor. Geophys., 9, 70-75.

Nahon, D. (1977)
Time factor and geochemistry in iron crusts genesis, Catena, 4, 249-254

Nahon, D., Janot, C., Karpoff, A.M., Paquet, H. and Tardy, Y. (1977)
Mineralogy, petrography and structures of iron crusts (ferriretes) developed on sanstones in the western part of Senegal, Geoderma, 19, 263-277

Nahon, D., Carrozi, A.V. and Parron, C. (1980)
Lateritic weathering as a mechanism for the generation of ferruginous ooids J. Sed. Petrol., 50, 1287-1298.

N.S.W. Dept Mines (1912)
Annual Report, New South Wales Department of Mines, N.S.W. Govt.

N.S.W. Dept Mines (1913)
Annual Report, New South Wales Department of Mines, N.S.W. Dept Mines.

N.S.W. Dept Mines (1914)
Annual Report, New South Wales Department of Mines, N.S.W. Govt.

Ollier, C.D. (1967)
Landforms of the Newer Volcanic Province of Victoria, in Jennings, J.N. and Mabbut, J.A. (eds) Landform Studies of Australia and New Guinea,, ANU Press, Canberra, 315-339.

Ollier, C.D. (1968)
Lava displaced drainage and deep leads, in Fairbridge, R.W. (ed.) (1968) The Encyclopedia of Geomorphology, Reinhold, New York.

Ollier, C.D. (1969)
Volcanoes, A.N.U. Press, Canberra

Ollier, C.D. (1976)
Catenas in different climates, in Derbyshire, E. (1976) op. cit., 137-169.

Ollier, C.D. (1977)
Early landform evolution, in Jeans, D.N. (1977) op. cit., 85-98.

Ollier, C.D. (1978a)
Tectonics and geomorphology of the eastern highlands, in Davies, J.L. and Williams, M.A.J. (1978) op. cit., 5-47.

Ollier, C.D. (1978b)
Silcrete and weathering, in Langford-Smith, T. (1978) op. cit, 13-17.

Ollier, C.D. (1979)
Evolutionary geomorphology of Australia and Papua New Guinea, Trans. Inst. Brit. Geogr., 4, 516-539.

Ollier, C.D. (1981)
Tectonics and Landforms, Longman, London.

Ollier, C.D. (1982a)
The great escarpment of eastern Australia: tectonic and geomorphic significance, J. geol. Soc. Aust., 29, 13-23.

Ollier, C.D. (1982b)
Geomorphology and tectonics of the Dorrigo Plateau, N.S.W., J. geol. Soc. Aust., 29, 431-435.

Ollier, C.D. (1982c)
Geomorphology and tectonics of the Armidale region, in Flood, P.G. and Runnegar, B. (1982) op. cit., 140-147.

Ollier, C.D. and Tuddenham, W.G. (1962)
Slope development at Cooper Pedy, South Australia, J. geol. Soc. Aust., 9, 91-105.

Pain, C.F. (1983)
Geomorphology of the Barrington Tops area, New South Wales, J. geol. Soc. Aust., 30, 187-194.

Pallister, J.W. (1956)
Slope development in Buganda, Geogrl. J., 122, 80-87.

Paton, T.R. and Williams, M.A.J. (1972)
The concept of laterite, Ann. Assoc. Am. Geog., 62, 42-56.

Paton. T.R. (1978)
The Formation of Soil Material, Allen and Unwin, London.

Plumb, K.A. (1979)
The tectonic evolution of Australia, Earth-Sc. Rev., 14, 205-249.

Radwanski, S.A. and Ollier, C.D. (1959)
A study of an east African catena, J. Soil Sc., 10, 149-168.

Raggatt, H.G. (1938)
Note on the silicified terrace sands ('grey billy') in the Hunter Valley (New South Wales), J. Proc. Roy. Soc. N.S.W., 72, 318-324.

Roedder, E. (1977)
Fluid inclusions as tools in mineral exploration, Econ. Geol., 72, 503-525.

Roedder, E. (1979)
Fluid inclusions as samples of ore fluids, in Barnes, H.L. (ed.) (1979) Geochemistry of Hydrothermal Ore Deposits (2nd ed.), Wiley, New York.

Rohdenburg, H. (1969)
Slope pedimentation and climatic change as principal factors of planation and scarp development in tropical Africa, Beitrage zur Geomorphologie de weschselfeuchten Tropen, 20, 127-133.

Ruxton, B.P. and Taylor, G. (1980)
The geology of the upper Shoalhaven plain (abstract), in Truswell, E.M. and Abell, R.S. (1980) op. cit., 63-64.

Schafer, B.M. (1973)
Distribution, nature and genesis of euchrozem and related soils in the Arding area, N.S.W., Unpubl. M.Rur.Sc. thesis, University of New England, Armidale, N.S.W.

Schafer, B.M. and McGarity, J.W. (1980)
Genesis of red and dark brown soils on basaltic parent materials near Armidale, N.S.W., Australia, Geoderma, 23, 31-47.

Schumm, S.A. (1963)
The disparity between present rates of denudation and orogeny, U.S. Geol. Surv. Prof. Pap., 454H,

Schumm, S.A. (1967)
Rates of surficial rock creep on hillslopes in western Colarado, Science, 155, 560-561.

Schumm, S.A. and Lichty, R.W. (1965)
Time, space and causality in geomorphology, Am. J. Sc., 263, 110-119.

Sears, D.W. (1978)
The Nature and Origin of Meteorites, Adam Hilger Ltd, Bristol.

Senior, B.R. (1978)
Silcrete and chemically weathered sediments in southwest Queensland, in Langford-Smith, T. (1978) op. cit., 41-50.

Senior, B.R. and Mabbutt, J.A. (1979)
A proposed method of defining deeply weathered rock units based on regional geological mapping in southwest Queensland, J. geol. Soc. Aust., 26, 237-254.

Seymour, J. (1980)
Soil erosion: can we dam the flood?, Ecos, 25, 3-11.

Simpson, B. (1966)
Rocks and Minerals, Pergamon, Oxford.

Sivarajasingham, S., Alexander, L.T., Cady, J.G. and Cline, M.G. (1962)
Laterite, Adv. Agron., 14, 1-60 (quoted in McFarlane, M.J. (1976) op. cit.).

Skolnik, H. (1965)
The quartzite problem, J. Sed. Petrol., 35, 12-21.

Slade, M.J. (1966)
A stratigraphic and palaeobotanical study of the lower Tertiary sediments of the Armidale district, New South Wales, Unpubl. M.Sc. thesis, University of New England, Armidale, N.S.W.

Smale, D. (1978)
Silcretes and associated silica diagenesis in southern Africa and Australia, in Langford-Smith, T. (1978) op. cit., 261-279.

Steiger, R.H. and Jäger, E. (1977)
Subcommission on geochronology: convention on the use of decay constants in geo- and cosmochronology, Earth Planet. Sc. Lett., 36, 359-362.

Stephens, C.G. (1971)
Laterite and silcrete in Australia: a study of the genetic relationships of laterite and silcrete and their companion materials, and their collective significance in the formation of the weathered mantle, soils, relief and drainage of the Australian conti

Stephenson, P.J., Griffin, T.J. and Sutherland, F.L. (1980)
Cainozoic volcanism in northeastern Australia, in Henderson, R.A. and Stephenson, P.J. (1980) The Geology and Geophysics of Northeast Australia, Geological Society of Australia, Queensland Division, 349-374.

Stephenson, R.A. (1970)
On the use of grain size analysis in geomorphological studies, The Professional Geographer, 22, 200-202.

Stonier, G.A. (1895)
Report on the Uralla gold field, N.S.W. Dept of Mines Ann. Rep. 1895, 162-165.

Summerfield, M.A. (1983a)
Geochemistry of weathering profile silcretes, southern Cape Province, South Africa, in Wilson, R.C.L. (1983) op cit., 167-178.

Summerfield, M.A. (1983b)
Silcrete, in Goudie, A.S. and Pye, K. (1983) op cit, 59-91.

Süssmilch, C.A. (1909)
Notes on the physiography of the southern tableland of New South Wales, J. Proc. Roy. Soc. N.S.W., 43, 331-354.

Süssmilch, C.A. (1940)
The geomorphology of the Hunter River district, New South Wales, Proc. Linn. Soc. N.S.W., 65, 301-322.

Swan, S.B.St C. (1977)
Slope, in Lea, D.A.M., Pigram J.J.J. and Greenwood, L. An Atlas of New England, Dept of Geography, University of New England, Armidale, N.S.W., 17-23.

Taylor, G. (1978a)
Silcretes in the Walgett-Cumborah region of New South Wales, in Langford-Smith, T. (1978) op. cit., 187-193.

Taylor, G. (1978b)
A brief Cainozoic history of the upper Darling basin, Proc. Roy. Soc. Vic., 90, 50-59.

Taylor, G. and Smith, I.E. (1975)
The genesis of sub-basaltic silcretes from the Monaro, New South Wales, J. geol. Soc. Aust., 22, 377-385.

Taylor, G. and Smith, I.E. (1976)
Reply to discussion, J. geol. Soc. Aust, 23, 115-116.

Taylor G., Taylor, G.R., Foudoulis, C. and Bink, M. (1983)
Pre-basalt topography in the Cooma area and its relation to the present drainage system, Geol. Soc. Aust., Abstracts No. 9, Lithosphere dynamics and evolution of continental crust. 6th Aust. Geol. Convention, Canberra.

Taylor, G.R. (1983)
Landscape evolution of the northern Monaro, NSW and its implications for the uplift history of the south-eastern Australian highlands, Geol. Soc. Aust., Abstracts No. 9, Lithosphere dynamics and evolution of continental crust. 6th Aust. Geol. Convention, Canberra.

Taylor, T.G. (1907)
The Lake George senkungsfeld, a study of the evolution of Lakes George and Bathurst, New South Wales, Proc. Linn. Soc. N.S.W., 32, 325-345.

Taylor, T.G. (1911)
A discussion of the salient features in the physiography of eastern Australia, Comm. Bur. Met. Bull., 8, cited by Bishop, P. (1982) op cit.

Thomas, M.F. (1966)
Some geomorphological implications of deep weathering patterns in crystalline rocks in Nigeria, Trans. Inst. Brit. Geogr., 40, 170-193.

Thomas, M.F. (1974)
Tropical Geomorphology, Macmillan, London.

Thomas, M.F. (1978)
Chemical denudation and landform development in Sierra Leone, in Alexandre, J. (ed.) (1982) Geomorphologie Dynamique dans les Regions Intertropicales, Presses Univitaires du Zaire, 243-264.

Thornbury, W.D. (1969)
Principles of Geomorphology (Second Ed.), Wiley, New York.

Thornes, J.B. and Brunsden, D. (1977)
Geomorphology and Time, Methuen, London.

Trask, P.D. (1952)
Sources of beach sands at Santa Barbara, California, as indicated by mineral grain studies, B.E.B. Tech. Memo., 28, Washington (Cited in King, C.A.M. (1966) op. cit.).

Truswell, E.M. and Abell, R.S. (eds) (1980)
The Cainozoic Evolution of Continental Southeast Australia, Abstracts of papers presented at a symposium, Canberra, 1980, Bureau of Mineral Resources, Geology and Geophysics Record, 1980/67.

Turner, F.J. and Verhoogen, J. (1960)
Igneous and Metamorphic Petrology, McGraw-Hill, New York.

Van De Graaff, W.J.E. (1981)
Palaeogeographic evolution of a rifted cratonic margin: SW Australia - Discussion, Palaeogr., Palaeoclimatol., Palaeoecol., 34, 163-172.

Van de Graaff, W.J.E. (1983)
Silcrete in Western Australia: geomorphological settings, textures, structures and their genetic implications, in Wilson, R.C.L. (1983) op. cit., 159-166.

Van De Graaff, W.J.E., Crowe, R.W.A., Bunting, J.A. and Jackson, M.J. (1977)
Relict early Cainozoic drainages in arid Western Australia, Z. Geomorph., 21, 379-400.

Van den Broek, J.M.M. and Van der Waals, L. (1967)
The late Tertiary peneplain of South Limburg (the Netherlands), Soil Surv. Inst., Wageningen, Soil Surv. Paper No. 3.

Van Dijk, D.C. and Beckmann, G.G. (1978)
The Yuleba Hardpan, and its relationships to soil-geomorphic history, in the Yuleba-Tara region, southeast Queensland, in Langford-Smith, T. (1978) op. cit., 73-91.

Van Eysinga, F.W.B. (compiler) (1978)
Geological Time Table, Elsevier Publishing Co., Amsterdam.

Veevers, J.J. and Rundle, A.S. (1979)
Channel country fluvial sands and associated facies of central-eastern Australia: modern analogues of Mesozoic desert sands of South America, Palaeogr., Palaeoclimatol., Palaeoecol., 26, 1-16.

Voisey, A.H. (1942a)
The geology of the County of Sandon, N.S.W., Proc. Linn. Soc. N.S.W., 67, 288-293.

Voisey, A.H. (1942b)
The Tertiary land surface in southern New England, J. Proc. Roy. Soc. N.S.W., 76, 82-85.

Voisey, A.H. (1955)
The building of New England, Inaugural Public Lecture, Armidale, N.S.W.

Voisey, A.H. (1957)
Erosion surfaces around Armidale, N.S.W., J. Proc. Roy. Soc. N.S.W., 90, 128-133.

Voisey, A.H. (1963)
The geology of New England, in Warner, R.F. (1963) New England Essays, 3-10, University of New England, Armidale, N.S.W.

Walcott, R.H. (1898)
The occurrence of so-called obsidian bombs in Australia, Proc. Roy. Soc. Vic., 11, 25-53.

Walker, G.T. (1979)
Origin of the New England lagoons, Unpubl. MS.

Warner, R.F. (1970)
The early Tertiary landscape in southern New England: a reappraisal, Aust. Geogr., 11, 242-258.

Warner, R.F. (1971)
The Evolution of the Landscape in Southern New England, Occasional Paper 1, Geographical Society of N.S.W., New England Branch.

Warner, R.F. (1975)
Some aspects of landscape evolution in southern New England, Paper presented to the Institute of Australian Geographers Conference, Wollongong, 1975, 13 pp.

Wayland, E.J. (1933)
Peneplains and some other erosional platforms, Ann. Rep. Bull. Uganda Geol. Surv. Dept, Notes 1, 77-79, cited in Finkl, C.W. (Jr) (1979) op. cit..

Weissel, J.K. and Hayes, D.E. (1977)
Evolution of the Tasman Sea reappraised, Earth Planet. Sci. Lett., 36, 77-84.

Wellman, P. (1979a)
On the Cainozoic uplift of the southeastern Australian highlands, J. geol. Soc. Aust., 26, 1-9.

Wellman, P. (1979b)
Reply: On the Cainozoic uplift of the southeastern Australian highland, J. geol. Soc. Aust., 26, 318.

Wellman, P. and McDougall, I. (1974a)
Potassium-argon ages on the Cainozoic volcanic rocks of New South Wales, J. geol. Soc. Aust., 21, 247-272.

Wellman, P. and McDougall, I. (1974b)
Cainozoic igneous activity in eastern Australia, Tectonophysics, 23, 49-65.

Whalley, W.B. and Chartres, C.J. (1976)
Preliminary observations on the origin and sedimentological nature of sarsen stones, Geologie en Mijnbouw, 55, 68-72.

Wilkinson, J.F.J. (1967)
Petrography of basaltic rocks, in Hess, H.H. and Poldervaart, A. (1967) Basalts: The Poldervaart Treatise on Rocks of Basaltic Composition, Interscience Publishers, New York, 163-205.

Williamson, W.O. (1957)
Silicified sedimentary rocks in Australia, Am. J. Sc., 255, 23-42

Wilson, R.C.L. (ed.) (1983)
Residual Deposits: Surface Related Weathering Processes and Materials, Blackwell, for the Geological Society of London.

Woolley, D.R. (1978)
Cainozoic sedimentation in the Murray drainage system, New South Wales section, Proc. Roy. Soc. Vic., 90, 61-65.

Woolnough, W.G. (1927)
Presidential address. Part 1. Chemical criteria of peneplanation, J. Proc. Roy. Soc. N.S.W., 61, 17-53

Wopfner, H. (1978)
Silcretes of northern South Australia and adjacent regions, in Langford-Smith, T. (1978) op. cit., 93-141.

Wopfner, H. (1983)
Environment of silcrete formation: a comparison of examples from Australia and the Cologne Embayment, West Germany, in Wilson, R.C.L. (1983) op. cit., 151-158.

Wopfner, H. and Twidale, C.R. (1967)
Geomorphological history of the Lake Eyre Basin, in Jennings, J.N. and Mabbutt, J.A. (1967) op. cit., 118-143.

Wynne-Edwards, H.R. (1977)
Metallogenic implications of the millipede model - ductile ensialic orogenesis in the Proterozoic, in Orthodoxy and Creativity at the Frontiers of Earth Science (abstract), University of Tasmania, Hobart.

Yaalon, D.H., Jungreis, C. and Koyumdjisky, H. (1971)
Distribution and reorganisation of manganese in three catenas of Mediterranean soils, Geoderma, 7, 71-78.

Young, A. (1960)
Soil movement by denudational processes on slopes, Nature, 188, 120-122.

Young, A. (1976)
Tropical Soils and Soil Survey, Cambridge University Press, Cambridge.

Young, R.W. (1970)
A probable post-uplift age for the duricrust on the south coast of N.S.W., Search, 1, 163-164.

Young, R.W. (1971)
Duricrust chronology, Search, 2, 263.

Young, R.W. (1972)
A deeply weathered land surface on the south coast of N.S.W., Paper presented to the 44th ANZAAS Congress, Sydney, 1972, 8 pp.

Young, R.W. (1978a)
Silcrete in a humid landscape: the Shoalhaven valley and adjacent coastal plains of southern New South Wales, in Langford-Smith, T. (1978) op. cit., 195-207.

Young, R.W. (1978b)
The study of landform evolution in the Sydney region: a review, Aust. Geogr., 14, 71-93.

Young, R.W. (1980)
Geomorphology and tectonic interpretations of part of the highland crest, N.S.W. (abstract), in Truswell, E.M. and Abell, R.S. (1980) op. cit., 82.

Young, R.W. (1981)
Denudational history of the south-central uplands of New South Wales, Aust. Geogr., 15, 77-88.

Young, R.W. and Bishop, P. (1980)
Potassium-argon ages on Cainozoic volcanic rocks in the Crookwell-Goulburn area, New South Wales, Search, 11, 340-341.

Young, R.W. and McDougall, I. (1982)
Basalts and silcretes on the coast near Ulladulla, southern New South Wales, J. geol. Soc. Aust., 29, 425-430.

Young, R.W. and McDougall, I (1983a)
Basalts and silcretes on the coast near Ulladulla, southern New South Wales, J. geol. Soc. Aust., 29, 425-430.

Young, R.W. and McDougall, I. (1983b)
Reply: origin of coastal lowlands near Ulladulla, New South Wales, J. geol. Soc. Aust., 30, 248-249.

Zakaria, A.S. (1977)
Controls upon the mineral outputs from three small catchments in New England, Unpubl. Ph.D. thesis, University of New England, Armidale, N.S.W.