

North Queensland Naturalist

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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 11th November, 1935.

Lecture by Mr. Gilbert Bates, "The Theory of Coral Reef Formation."

Election of Members.

Mr. E. W. Priest, c/o Mayne & Co. Ltd.,
Wilson St., Newtown, N.S.W.
Mrs. Dalziel, Box 75, Atherton.
Mr. E. G. Roberts, Telegraph Office,
Cairns.
Mr. F. Slater, Edmonton.

Proposers	Seconders
Mr. S. Dunn	Mr. J. Wyer
Mr. J. G. Brooks	Miss Hooper
Mr. J. Wyer	Mr. Morris
Dr. H. Flecker	Mr. S. Dunn

The September Lecture.

Mr. S. T. Blake, M.Sc., chose as his subject "A Botanist's Travels in Western Queensland." He dealt fully with the types of country and vegetation found in Western Queensland, also with the importance from the pastoral point of view. The lecture was supplemented with a number of lantern slides and these made the lecture more interesting and educational. "The hospitality of the people in Western Queensland cannot be surpassed," said Mr. Blake.

Exhibits at the October Meeting.

Dr. H. Flecker—A collection of plants from the North Queensland Herbarium, showing the standard mounting of specimens.

Rhododendron Lochae from Mt. Bartle Frere, 4,800 feet above sea level.

Capt. W. Fish—Name plates to be used in the naming of trees in the City of Cairns.

Capt. W. Fish—Blossom, *Darlingia spectatissima*, a tree known on the Atherton Tablelands as Grey Silky or Bull Oak.

The leaf of *Pteris cretica* var. *albolincata*. This specimen was grown by him from spores. It is a horticultural form, not native, and probably from Crete.

Mr. S. Dunn—Larva of *Danaida archippus* Fabr., Order Lepidoptera, Family Nymphalidae, Sub-family Danainae. This specimen was collected on an orange tree.

Mr. J. G. Brooks, L.D.S.—A collection of Coleoptera, listed in the September issue of this journal.

Visitors during October.

Professor A. Watson (Adelaide), interested in Fish and Geology.

Mr. S. T. Blake, M.Sc. (Brisbane), Walter and Eliza Hall Research Scholar in Economic Biology for 1935-36. Studying the Grazing Lands of Queensland for the Queensland Government.

Mr. Taylor (Sydney), from the School of Tropical Medicine, Entomologist.

Mr. J. Callaghan (Brisbane), interested in the rotary hoe as an agent for the destruction of the larvae of *Lepidiodia caudata*, which are destroying the pastoral grasses of the Atherton Tablelands.

BOOK REVIEW.

7. AUSTRALIAN SPIDERS AND THEIR ALLIES by Walter W. Froggatt, F.R.Z.S., Pres. Naturalists' Soc., N.S.W., 123 p.p., 50 illust. Publ. by Roy. Zool. Soc. of N.S.W., 2/6. This is the first handbook yet published on Australian spiders, etc., and includes illustrated descriptions of spiders, ticks, mites, centipedes, bug killers, scorpions and wood lice. For popular study and reference at a popular price, it is difficult to conceive of a more useful volume. The descriptions are as free from technical terms as is possible, and in addition to the technical names, vernacular names are given in practically every instance to various families as well as to the different species. To those who desire to know something about our spiders and their allies, this volume can be strongly recommended.

FOSSILS AND THEIR MEANING.

Synopsis of Lecture given to the North Queensland Naturalists' Club by F. S. COLLIVER, Esq., Hon. Sec. Field Naturalists' Club of Victoria.

The study of fossils or the science of Palaeontology (Gr. Palaios, ancient; onta, beings; logos, reasoning) is one of the oldest of the sciences, although many strange ideas in relation to the nature of fossils were held by the early workers. For example: Theophrastus (about 300 B.C.) thought that fossils were due to a plastic virtue latent in the earth; this idea was adopted by quite a number of subsequent naturalists who ought to have known better.

The term "Fossil" (Lit. fossus, dug up) is now restricted to the remains of or evidence of previous life on the earth. When fossils were first collected it was evident that they were not all of the same age owing to their position in the strata, and it was soon seen that some table for age determination was necessary.

Early workers divided the then known strata into three layers which they called Palaeozoic Mesozoic and Cainozoic; or most, middle and least ancient. Another series of terms were Primary, Secondary and Tertiary, and both of these sets are used for classification purposes still.

These terms were insufficient and gradually others were introduced, these introductions were mainly for well-developed series of strata, and in many cases the names used were taken from the locality; e.g.: Devonian from Devon; Jurassic from the Jura Mountains; and now we have quite a lengthy series of names denoting ages for the various strata that constitute the earth's crust; for Australia, they may be listed as follows:—

ERA	EPOCH
Cainozoic or Tertiary	Holocene
	Pleistocene
	Pliocene
	Miocene
	Oligocene
Mesozoic or Secondary	Eocene
	Cretaceous
	Jurassic
	Triassic
	Permian
Palaeozoic or Primary	Carboniferous
	Devonian
	Silurian
	Ordovician
	Cambrian
	Pre-cambrian

It must be noted that when the term "Beds" or "Series" are used they have reference to deposits of rock that have been laid down in water (either marine, lacustrine or estuarine) or wind blown deposits that have collected on the surface; it is practically only in deposits of these kinds that fossils occur. The word rock may mean either sandstones, shales, slates, limestones, mudstones, clays or loose earthy deposits.

The question is often asked "How old are these in terms of years?" Here the geologist is surrounded by difficulties, and it is impossible to give an answer with any degree of accuracy. To illustrate this:— Two workers endeavoured to obtain at least an approximate series of ages in terms of years for the epochs given, by estimating the time taken for sedimentary deposits to form in the sea at the present time.

It was found by actual measurement that approximately one inch of sediment formed per century, this being an average taken for numerous different localities; the thickness of all the known sedimentary series was estimated and the total brought to inches.

For England, the total thickness of the sedimentary series was approx. 18 miles and this gave an age of 33½ million years, in Australia, however, the total thickness of the sediments is nearly 37 miles, this then would make Australia to be twice the age of England; it can be seen then that any such estimation for age is subject to a great deal of error; and when other workers using other theories to base their calculations on, obtain answers which vary by thousands of million of years, it can be seen that these estimations though interesting, are of little value to the science.

For age of a fossil then, we use the name of the series the specimen occurs in; e.g.: Silurian, Eocene or Pleistocene, etc.

Fossils may be the actual animals preserved (e.g.: Mammoths preserved in the frozen soils of Siberia) complete skeletons or only separate bones or teeth, shells or other hard parts of animals, vegetable matter, casts and impressions or even footprints and other similar markings.

(To be continued)

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

- Schizomeria, Don-floribunda, Schlatter.
L. Barrine (Kajewski).
- Davidsonia, F.v.M.
pruriens, F.v.M. Davidsonian Plur. 10.
Edge Hill (Flecker), Mourilyan (Flecker), Tully R. (J. F. Bail).
- Ackama, Cunn. and Francis.
quadrivalvis, White and Francis. 3 to 7.
Cooktown Dist. (Swain), Gadgarra (Kajewski), Innisfail. Jungle (Swain), Rockingham B. (Dall).
- Geissois.
lachnocarpa, F.v.M. Rose Marara. 12 to 4.
Up. Barron R. (J. F. Bail), Atherton Dist. (Swain).
- Weinmannia, L.
apetala, F.M.B. 12 and 1.
Kamerunga (Cowley).
- Family CRASSULACEAE. DC.
Bryophyllum, Salisb.
calycinum, Salisb. Africa.
Cairns (Wright).
- Family NEPENTHACEAE.
Nepenthes, L.
Kennedyana, F.v.M.
C. York (Jardine), C. Sidmouth (Moore).
- Bernaysii, F.M.B.
C. York (Jardine).
- albo-lineata, F.M.B.
C. York Pen. (Jardine).
- Moorei, F.M.B.
C. York Pen. (Jardine).
- Jardinei, F.M.B.
Somerset (Jardine).
- Rowanae, F.M.B.
C. York (Jardine).
- Alicae, F.M.B.
C. York Pen. (Jardine).
- Cholmondeleyi, F.M.B.
5 miles S. of Jardine R. (Jardine).

- Armbrusteeae, F.M.B.
Coen (Miss Armbrust).
- Garrawayae, F.M.B.
Betw. York Dns. and Weipa (Garraway).

Family OENOTHERACEAE.

- Jussiaea, L.
suffruticosa, L. 3 to 10.
Mt. Mulligan (Flecker), Lizard I. (M'Gillivray), Innisfail (Flecker), Burdekin R. (Bowman).
- Ludwigia, L.
parviflora, Roxb. 4.
Hodgkinson R., Mt. Mulligan (Flecker).
- Gaura, L.
parviflora, Roxb.
Hodgkinson R., Mt. Mulligan (Flecker).

Family ARISTOLOCHIACEAE,

- Juss.
Aristolochia, L. Birthwort.
deltantha, F.v.M.
Pt. Douglas, F.M.B., Rockingham B. (Dall.)
- pubera, R.Br.
Rockingham B. (Dall.)
- Thozetii, F.v.M.
Barron R. (Nugent), Rockingham B. (Dall.)
- indica, L., var. magna, F.v.M.
Is. of Torres Str. (F.M.B.), Endeavour R. (B. and Sol.), Rockingham B. (Dall.).

Family Lythraceae.

- Ammania, L.
pentandra, Roxb.
Lynd R. (Leichardt), Endeavour R. (R.Br.).
var. decussata, Benth.
Is. of G. of Carp. (F.M.B.).
- diandra, F.v.M.
Gulf Country (F.M.B.)
- triflora, R.Br.
Is. of G. of Carp. (R. Br.).

ADDENDA ET CORRIGENDA.

Vol. 1, no. 9, p. 6. Before (Peperomia) enervis add (P.) reflexa, Dietr. 6, 10. Mt. Bartle Frere (Flecker).
P. 8. Polanisia viscosa. Add loc. Carpentaria Dns. (Crossbie) and no. 6.

No. 10, p. 5. Drosera indica. Add loc. Barron R., Mareeba (Flecker) and no. 7.
P. 8. Acronychia haplophylla. Add loc. Bartle Frere (Flecker) and no. 6.
No. 11, p. 4 Add (F.M.B.) after following locs.

- Canarium muelleri, Bloomfield R.
- Ganophyllum falcatum, Both.
- Tribulus terrestris. Add locs. Carpentaria Dns. (Crosbie) and Mareeba (Flecker) and add mos. 6 and 7.
- Add (F.M.B.) after following locs.
- T. cystoides. G. of Carpentaria and Pennefather R.
- T. hystrix. Towards G. of Carpentaria.
- Ryssopteris timorensis. C. Cleveland.
- After Malvastrum tricuspdatum Gray. Introduced add Pantropical. Add mo. 7.
- Before (Sida) macropoda add (S.) corrugata, L. 6. Carpentaria Dns (Crosbie). Var. trichopoda, Benth. 7. Carpentaria Dns. (Crosbie).
- Add (F.M.B.) after following locs.
- S. macropoda. G. of Carpentaria.
- S. acuta, var. mutica. Macarthur R., G. of Carpentaria.
- Abutilon otocarpum, Stokes' Range on Gilbert R.
- A. graveolens, Pipe's Is.
- A. muticum. Source of Burdekin.
- Urena armitiana. Etheridge R.
- P. 6 Melhania incana. Add loc. Carpentaria Dns. (Crosbie) and mo. 6
- Before Waltheria add Melochia, L., pyramidata, L. 6. Carpentaria Dns. (Crosbie).
- W. americana. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- Commersonia echinata. Add loc. Behana Cr. (Flecker) and mo. 9.
- Grewia polygama. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- Before Corchorus add (T.) repens Merr. 6. Green I. (Flecker).
- P. 8. Glochidion supra-axillare. Add loc. Proserpine (Macpherson) and mo. 9.
- No. 12. p. 6. Mallotus philippinensis. Add loc. Barron R., Mareeba (Flecker).
- P. 8. Ficus eugenioides. After loc. Atherton add (F.M.B.). Add mo. 8.
- Vol. 2, p. 2. F. casearia. Add loc. Russell R. (Flecker) and mo. 6.
- P. 4. Caryospermum arborescens. Add loc. Bartle Frere (Flecker) and mo. 6.
- P. 8. Harpullia frutescens. Add loc.

- Mt. Bartle Frere (Flecker) and mo. 6.
- Dodonaea lanceolata. After Mt. Mulligan add (Flecker). Add loc. Rechter's Cr. (Flecker) and mo. 7.
- P. 12. For (Plumbago) zealanica read zeylanica. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- P. 14. After Amarantus spinosus (L.) Prickly Amaranth. Introduced, add Pantropical. Add mo. 9.
- Amarantus viridis. Add loc. Carpentaria Dns. (Crosbie).
- P. 16. Before (Alternanthera) denticulata add (A.) nodiflora, R. Br. 6. Carpentaria Dns. (Crosbie). (A) denticulata. Add loc. Carpentaria Dns. (Crosbie) and mos. 6 to 8.
- (A) nana. Add loc. Carpentaria Dns. (Crosbie) and mos. 1 to 3 and 6 to 8.
- After Gomphrena decumbens add Jacq.
- Chenopodium carinatum. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- P. 18. Before (Mollugo) Spargula add (M.) Glinus, A. Rich. 6. Carpentaria Dns. (Crosbie).
- Polygonum plebeium. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- P. 22. Pisonia umbellifera. Add loc. Bartle Frere (Flecker) and mo. 6.
- For THYMELAEACEAE read THYMELEACEAE.
- Pimelea cornucopiae. Add loc. Yungaburra (Carmichael) and mos. 4 and 6.
- Vol. 3, P. 3. Croton linifolia. Add locs. Mareeba (Flecker), Yungaburra (Carmichael) and mos. 4, 6 and 8.
- P. 7. Psoralea leucantha. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
- P. 23. Alysicarpus vaginalis. Add loc. Mareeba (Flecker) and mo. 7.
- P. 27. After (Glycine) tabacina, Benth., add Variable Glycine.
- P. 44. Cassia retusa. Add loc. Bartle Frere (Flecker) and mo. 6.
- C. mimusoides. Add loc. Yungaburra (Carmichael) and mo. 6.
- Acacia Victoriae. Add loc. Carpentaria Dns. (Crosbie) and mo. 7.
- Vol. 4, P. 3. Rubus Hillii. Add loc. Chuchuba (Flecker) and mo. 6.
- P. 24. After Elaeagnus, add L.