

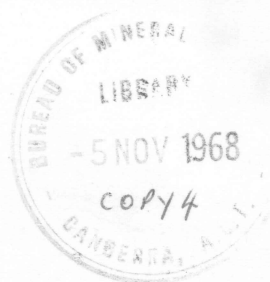
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RECORD 1968/33



MICROPALAEONTOLOGICAL EXAMINATION OF
SAMPLES FROM PAPUA - NEW GUINEA

by

G.R.J. Terpstra

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SUMMARY

Samples submitted by J.A.J. Smit collected from outcropping limestones in the Aitape, Menyamya, Lake Kopiago, and Star Mountains areas New Guinea have been examined. Rocks of Miocene, Oligocene and Eocene ages have been encountered.

INTRODUCTION

The samples examined have been collected during 1967 and 1968. Most of them consist of hard dense limestones of which smoothed surface sections and thin sections were prepared and studied. Details of the examination and the stratigraphical results are given below. Location maps 1 - 3 showing the position of the samples examined are attached.

Faunal and Stratigraphical Results

Aitape Area (Location Map No. 1)

02 N.G. 0589 Limestone outcrop, 20 miles south west of Aitape near Wewak. Lepidocyclina sp., Cycloclypeus sp., Miogypsina sp., Operculina sp., Elphidium sp., Globigerina sp. Algae.
Age: Miocene, Tertiary stage 'F₁ - F₂'.

02 N.G. 0667 Limestone outcrop, six miles south of Romei station near Aitape.
Lepidocyclina (?Eulepidina) sp., Miogypsina sp., Elphidium sp., Globigerina sp.
Age: Miocene, ?Top lower Miocene, Tertiary stage 'F₁ - F₂'.

Menyamya Area (Location Map No. 2)

27 N.G. 1002 Limestone outcrop, 6 miles due west of Menyamya.
Lepidocyclina (Nephrolepidina) sp., Lepidocyclina (Eulepidina) sp.
Age: Miocene Tert. 'e' stage.

27 N.G. 1021 Limestone outcrop, 1½ mile due east of Menyamya.
Algae; Bryozoa; Rotalia sp.
No age determination.

- 27 N.G. 1022 Limestone outcrop, $1\frac{1}{2}$ mile due east of Menyamya.
Algae.
No age determination.
- 27 N.G. 1026 Limestone outcrop, 6 miles east-south-east of Menyamya.
Lepidocyclina (Nephrolepidina) sp., Lepidocyclina
Eulepidina) sp., Miogypsina sp.
Corals; algae.
Age: Top Lower Miocene. Tert. 'e' to 'F₁ - F₂' stages.
- 27 N.G. 1028 Limestone outcrop, 4 miles due east of Menyamya.
Lepidocyclina (Eulepidina sp.), Heterostegina sp.;
Miogypsinoidea sp.; Discocyclina sp.; Pellatispira sp.,
Spiroclypeus sp.; ?Austrotrillina sp., Amphistegina sp.;
Corals, algae.
Age: Tertiary 'e' stage (Lower Miocene) with reworked
Eocene microfauna.
- 27 N.G. 1029 Limestone outcrop, 6 miles due east of Menyamya.
Lepidocyclina sp., Miogypsina sp., Bolivina sp.,
Elphidium sp., Operculina sp.; algae.
Age: Miocene. Tert. 'F₁ - F₂' stage.
- 27 N.G. 1030 Limestone outcrop, 6 miles due east of Menyamya.
Miogypsina sp., ?Lepidocyclina sp., Carpenteria sp.
Age: Miocene. Tert. 'F₁ - F₂' stage.
- 27 N.G. 1049 Limestone outcrop, 2 miles north of Menyamya.
Bolivina sp., Quinqueloculina sp., Globigerina sp.
No age determination.
- 27 N.G. 1050 Limestone outcrop, 2 miles east-north-east of Menyamya.
Bryozoa sp. Algae sp., no foraminifera.
No age determination.
- 27 N.G. 1052 Limestone outcrop, 6 miles south-east of Menyamya.
Lepidocyclina (Nephrolepidina) sp., Lepidocyclina
(? Eulepidina) sp., ?Austrotrillina sp., Miogypsina sp.,
Amphistegina sp., Bolivina sp. Algae sp.
Age: Top Lower Miocene. Tert. 'e' to 'F₁ - F₂' stages.
- 27 N.G. 1053 Limestone outcrop, 6 miles south-east of Menyamya.
Lepidocyclina sp., Amphistegina sp., Rotalia sp.,
Planorbulinella sp. Algae.
Age: Miocene. Tert. 'F₁ - F₂' stage.
- 27 N.G. 1058 Limestone outcrop, 6 miles north of Kainteba.
Lepidocyclina (Eulepidina) sp., Spiroclypeus sp.,
Heterostegina sp., Discocyclina sp., Nummulites sp.;
Corals, algae.
Age: Tertiary 'e' stage (Lower Miocene) with reworked
Eocene microfauna.

- 27 N.G. 1060 Limestone outcrop, 6 miles north of Kainteba.
Alveolina sp., Nummulites sp., Pellatispira sp.,
Gypsina sp., Discocyclina sp., corals, algae.
 Age: Eocene. Tert. 'b' stage.
- 27 N.G. 1064 Limestone outcrop, 6 miles north of Kainteba.
Discocyclina sp., Pellatispira sp., ?Radiolaria;
 Algae.
 Age: Eocene. Tert. 'b' stage.
- 27 N.G. 1071 Limestone outcrop, 6 miles north-east of Kainteba.
Lepidocyclina (Nephrolepidina) sp.; Lepidocyclina
 (?Eulepidina) sp., Austrotrillina sp., Flosculinella
 sp., Miogypsina sp., Amphistegina sp., Corals, algae.
 Age: Top Lower Miocene. Tert. 'e' to 'F₁ - F₂'
 stages.
- 27 N.G. 1076 Limestone outcrop, 4 miles north-east of Kainteba.
Lepidocyclina sp., Sorites sp., Carpenteria sp.;
 Corals, algae.
 Age: ?Miocene. ?Tert. 'F₁ - F₂' stage.
- 27 N.G. 1077 Limestone outcrop, 3 miles north-east of Kainteba.
Lepidocyclina (Nephrolepidina) sp., Quinqueloculina
 sp., Sorites sp., corals; algae.
 Age: Miocene. Tert. 'F₁ - F₂' stage.
- 27 N.G. 1081 Limestone outcrop, $\frac{1}{2}$ mile east of Kainteba.
Lepidocyclina (Nephrolepidina) sp.; Lepidocyclina
 (Eulepidina) sp., Miogypsinoides cf dehaarti (van der
 Vlerk, 1924). Carpenteria sp.
 Age: Top Lower Miocene. Tert. 'e' to 'F₁ - F₂'
 stages.
- 27 N.G. 1516 Limestone outcrop, 4 miles east of Menyamya.
Lepidocyclina (Nephrolepidina) sp., Lepidocyclina
 (?Eulepidina) sp., Miogypsinoides sp., Elphidium sp.,
Quinqueloculina sp., Nummulites sp., ?Discocyclina sp.
 Algae.
 Age: Miocene (possibly Tert. 'e' stage) with reworked
 Eocene.
- 27 N.G. 1517 Limestone outcrop, 4 miles east of Menyamya.
 No foraminifera.
 No age determination.

J.A.J. Smit has distinguished in this area three mappable units.

1. The Menyamya beds, which are steeply folded sediments with minor basic volcanics interbedded. The sediments consist mainly of greywacke with siltstone and shale but also limestone lenses occur interbedded. Samples representing this unit are: 27 N.G. 1002; - 1021; - 1022; - 1028; - 1049; - 1050 and probably - 1058 and - 1060.

2. The Basic Volcanics, sediments found to occur in massive outcrops along the border between the Menyamya Beds and the Langimar Beds. They consist of siltstone and massive conglomerates mainly with basic volcanic pebbles.

Samples representing this unit are: 27 N.G. 1026; - 1029; - 1030; - 1052 and - 1053.

3. The Langimar Beds which are broadly folded, hardly indurated sediments consisting mainly of siltstone with minor interbeds of greywacke and massive pebble conglomerates and several lenses of reef limestone. Samples representing this unit are: 27 N.G. 1071; - 1076; - 1077 and - 1081.

Lake Kopiago area (Laigap River) (Location Map No. 3)

- 04 N.G. 0500 Limestone outcrop at Lake Kopiago Field Station.
Amphistegina sp., Elphidium sp., Mollusca.
No age determination.
- 04 N.G. 0501 Limestone outcrop 1 mile south west of Lake Kopiago Field Station.
Lepidocyclina (Nephrolepidina) sp.; Lepidocyclina (Eulepidina) sp., Miogypsina sp., Elphidium sp.
Quinqueloculina sp., Lithothamnium. Algae.
Age: Lower Miocene probably Tert. 'e' stage.
- 04 N.G. 0509 Limestone outcrop, 8 miles west of Lake Kopiago.
Amphistegina sp. Algae.
No age determination.
- 04 N.G. 0514 Limestone outcrop, eight miles north-west-north of Lake Kopiago.
Lepidocyclina (Eulepidina) sp., Cycloclypeus sp., Lepidocyclina (Nephrolepidina) sp., Miogypsina sp., Amphistegina sp., Globigerina sp., Algae, Echinoid spines.
Age: Lower Miocene Tert. 'e' stage.
- 04 N.G. 0517 Limestone boulders, seven miles west-north-west of Lake Kopiago.
Discocyclus sp., Nummulites sp., Rotalia sp., Amphistegina sp.
Age: Eocene.
- 04 N.G. 0518 Limestone outcrop, seven miles west-north-west of Lake Kopiago.
Lepidocyclina (?Eulepidina) sp., Lepidocyclina (Tribliolepidina) sp., Heterostegina sp., Miogypsina sp. Echinoid spines.
Age: Top Lower Miocene, Tert. 'e' to 'F₁ - F₂' stages.

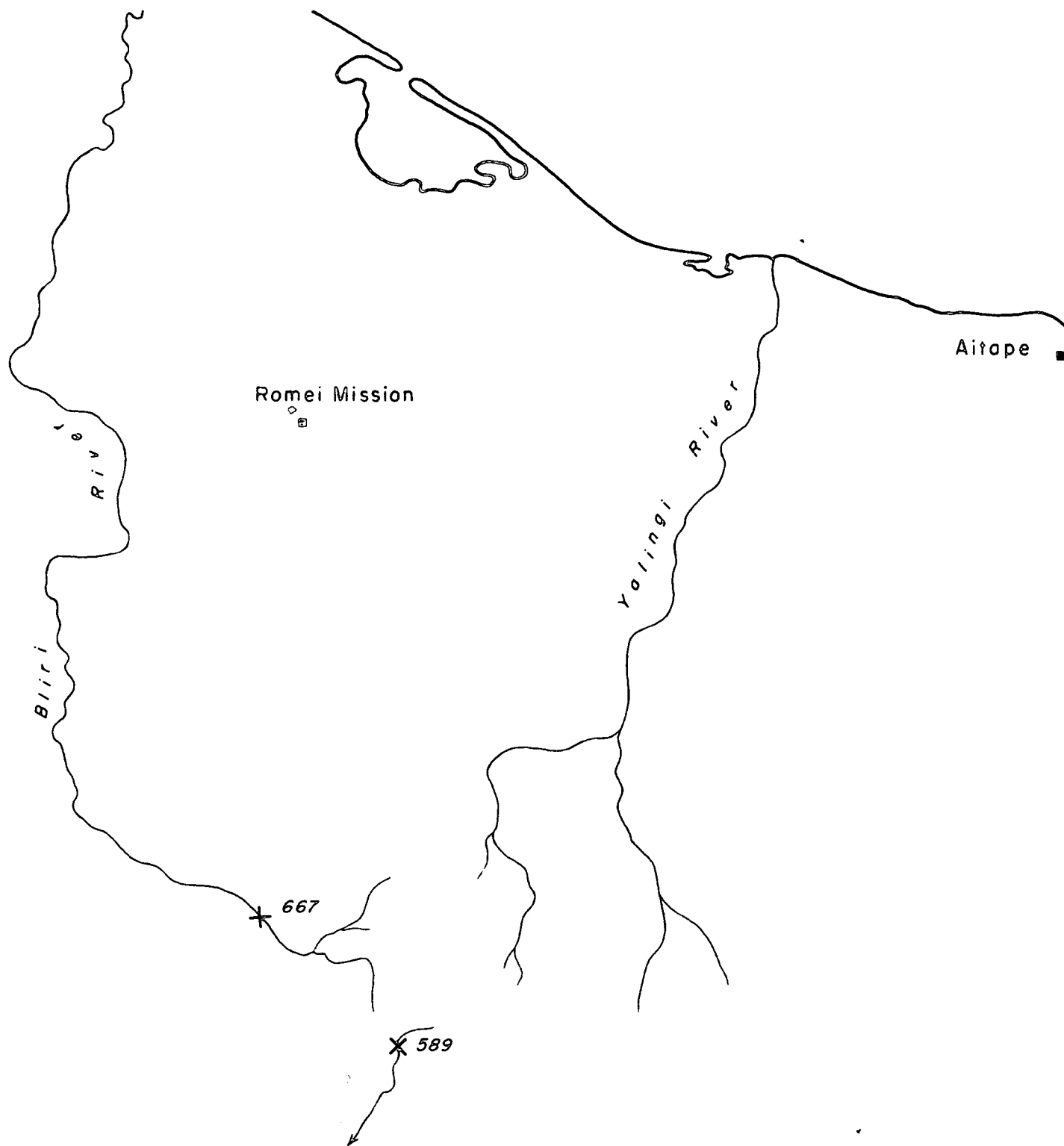
- 04 N.G. 0519 Limestone boulder along tributary of the OM river,
eight miles west-north-west of Lake Kapiago.
Nummulites cf fichtelli; Borelis sp., Quinqueloculina
sp., Bolivina sp.
Age: Upper Eocene - Lower Oligocene.
- 04 N.G. 0523 Pebbles collected along the OM River fifteen miles
north-west of Lake Kapiago.
- " specimen A Spiroclypeus sp., Lepidocyclina (Eulepidina) sp.,
Miogypsinides sp., Flosculinella sp.
Age: Lower Miocene Tert. 'e' stage.
- " specimen B Nummulites sp., Discocyclina sp.
Age: Eocene.
- 04 N.G. 0526 Limestone outcrop, two miles west of Lake Kapiago.
Rotalids, Bryozoa.
No age determination.

Star Mountains Area (Location Map No. 3)

- 04 N.G. 5001 (Field No. 217). Limestone outcrop, Star Mountains.
?Lepidocyclina sp.
Age: ?Miocene.
- 04 N.G. 5002 (Field No. 233). Limestone outcrop, Star Mountains.
This recrystallised limestone contains specimens of
Nummulites cf intermedius and Echinoid spines.
Age: probably Lower Oligocene Tert. 'c-d' stages.
- 04 N.G. 5003 (Field No. 375). Limestone outcrop, Star Mountains.
Lepidocyclina (Eulepidina) sp., Miogypsina sp.,
Elphidium sp., Discocyclina sp.
Age: Lower Miocene Tert. 'e' stage with some reworked
Eocene.
- 04 N.G. 5004 (Field No. 377). Limestone outcrops, Star Mountains.
04 N.G. 5005 (Field No. 379). No Foraminifera.
04 N.G. 5006 (Field No. 376). No age determination.

Location Map No.1. Aitape Area.

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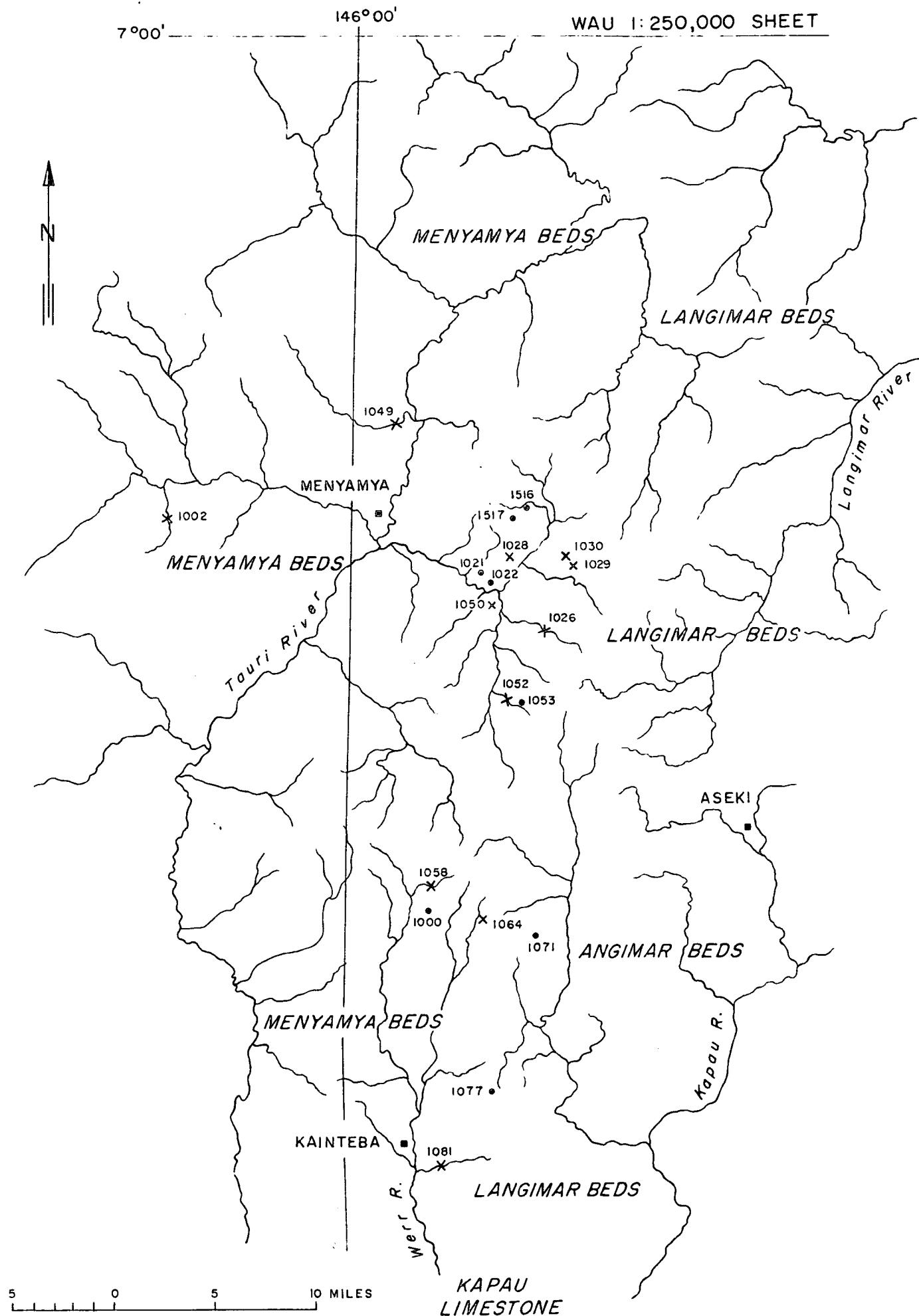


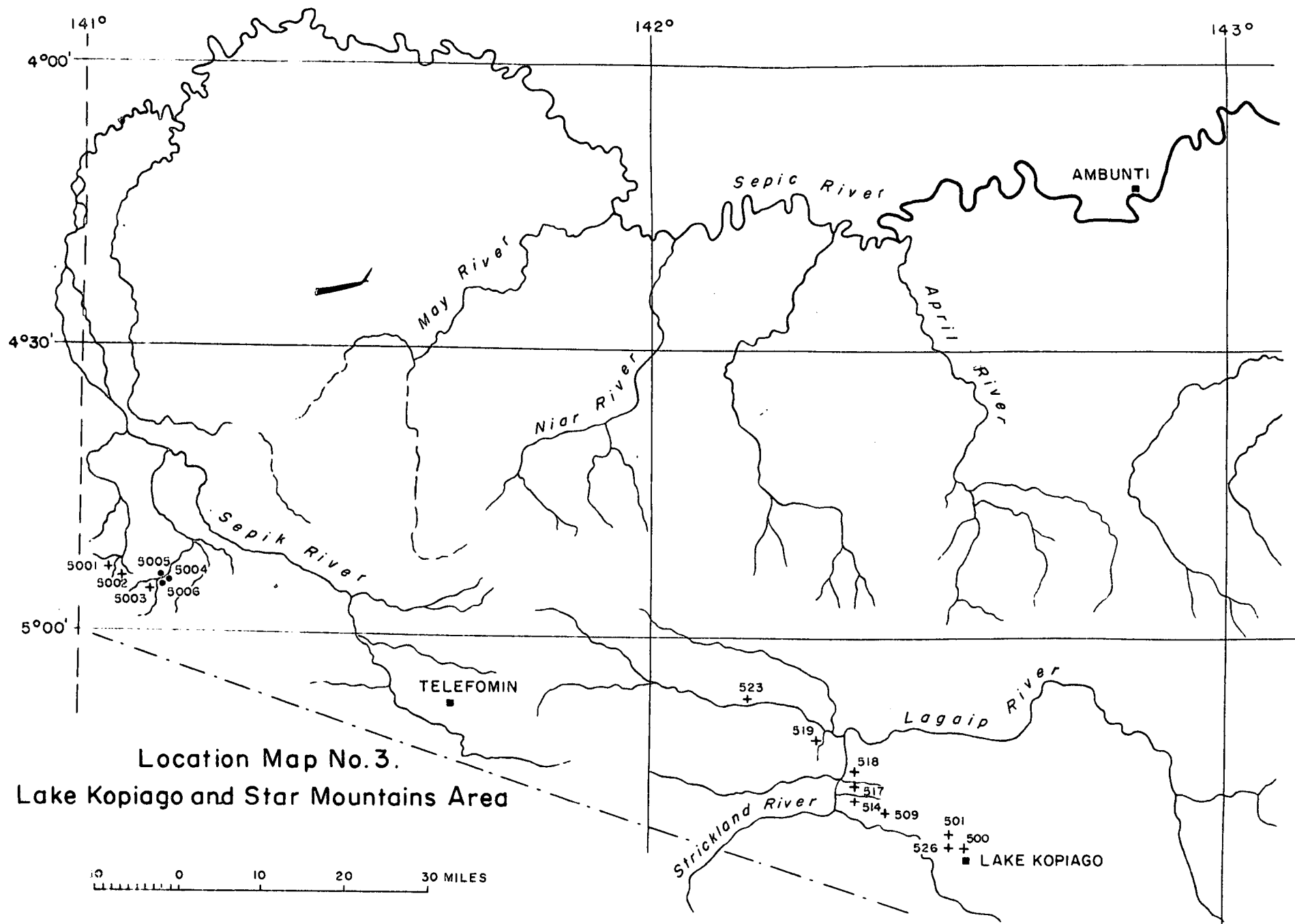
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Location Map No.2. Menyamya Area.

7°00' 146°00' WAU 1:250,000 SHEET





To accompany Record 1968/33.

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