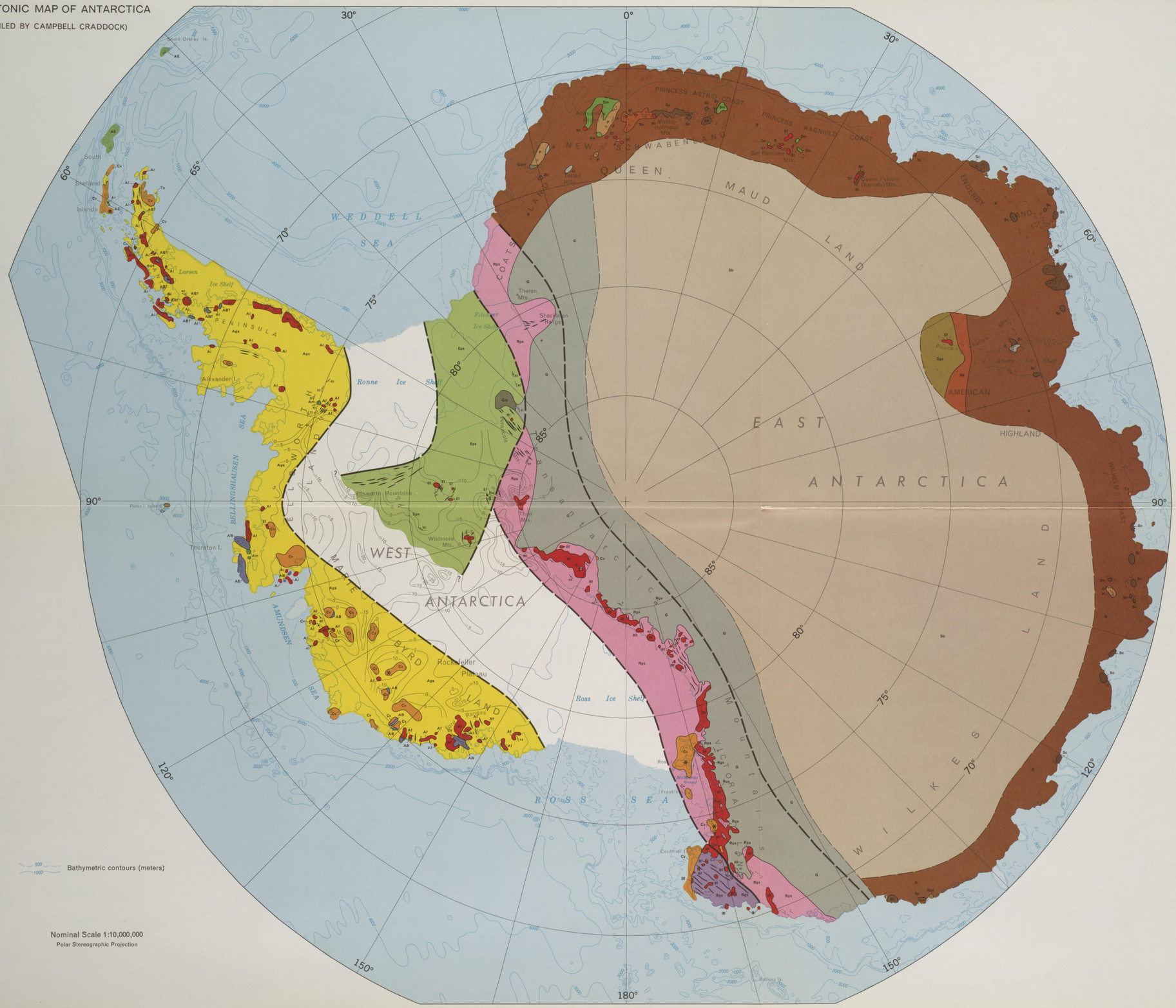
TECTONIC MAP OF ANTARCTICA

(COMPILED BY CAMPBELL CRADDOCK)



Bathymetric contours (meters)

Nominal Scale 1:10,000,000
Polar Stereographic Projection

E X P L A N A T I O N

CENOZOIC VOLCANIC PROVINCE
(formed late Cretaceous to Quaternary)

- Cv — Cenozoic volcanic rocks, mainly basaltic; widespread in Andean Orogen, common in Borchgrevink and Ross Orogens, but only at Gaussberg in East Antarctic Shield.

ANDEAN OROGEN
(formed late Cretaceous to early Tertiary)

- Ts — Undisturbed upper Tertiary strata overlying Andean Orogen.
- Af — Felsic intrusive rocks such as granite and granodiorite, mainly Upper Cretaceous to lower Tertiary but may include some older rocks.
- Am — Mafic intrusive rocks such as gabbro and diorite, mainly Upper Cretaceous to lower Tertiary but may include some older rocks.
- Ai — Intrusive igneous rocks of unspecified composition.
- Ags — Low-grade metasedimentary and metavolcanic rocks, mainly of green schist or lower facies, depositional age upper Paleozoic to Mesozoic; includes some strata probably folded and metamorphosed mainly during Ellsworth Orogeny.
- AE — Medium-grade metamorphic rocks of Scotia Arc, probably formed during Ellsworth Orogeny.
- AB — Medium- to high-grade metamorphic rocks, probably formed during Borchgrevink Orogeny.
- Af — Granite emplaced during or before Ellsworth Orogeny.

ELLSWORTH OROGEN
(formed late Triassic to early Jurassic)

- Gm — Large stratiform mafic intrusion, Jurassic.
- Ef — Felsic intrusive rocks, mainly granite, Upper Triassic to Lower Jurassic.
- Em — Altered gabbroic intrusive of Hart Hills, probably emplaced during late Paleozoic.
- G — Sedimentary rocks of Gondwana Sequence, gently folded.
- Egs — Low-grade metasedimentary and metavolcanic rocks, mainly of green schist or lower facies, depositional age upper Precambrian to upper Paleozoic; includes strata in Pensacola Mountains that were folded and metamorphosed during Ross Orogeny and during an older event.
- Ef — Granite emplaced during Ross Orogeny.

BORCHGREVINK OROGEN
(formed Silurian to Carboniferous)

- G — Sedimentary and volcanic rocks of Gondwana Sequence, flat-lying.
- Bf — Felsic intrusives, granitic rocks emplaced during middle Paleozoic.
- Bgs — Low-grade metasedimentary and metavolcanic rocks, mainly of green schist or lower facies, depositional age upper Precambrian to lower Paleozoic; includes strata that were folded and metamorphosed during Ross Orogeny.

ROSS OROGEN
(formed late Cambrian to Ordovician)

- G — Sedimentary and volcanic rocks of Gondwana Sequence, flat-lying to gently tilted, Devonian to Jurassic.
- Rf — Felsic intrusive rocks, mainly granitic, Upper Cambrian to Ordovician.
- Rgs — Low-grade metasedimentary and metavolcanic rocks, mainly of green schist facies, depositional age upper Precambrian to Cambrian; locally includes medium-grade metamorphic rocks which probably formed during one or more Precambrian events.

EAST ANTARCTIC SHIELD
(formed mainly during Precambrian but underwent extensive recrystallization during Ross Orogeny)

- G — Sedimentary and volcanic rocks of Gondwana Sequence, flat-lying to gently tilted.
- P — Upper Precambrian (Riphean) sedimentary and volcanic rocks, flat-lying to gently tilted, locally slightly metamorphosed.
- Ss — Shield below ice sheet, locally covered by flat-lying upper Precambrian to Jurassic strata.
- Sf — Felsic intrusive rocks such as granite and syenite, mainly Precambrian but some possibly as young as Jurassic.
- Sm — Mafic intrusive rocks such as gabbro, anorthosite, and diorite, Precambrian.
- Sc — Charnockite, Precambrian.
- S — High-grade metamorphic rocks of granulite facies, Precambrian.
- Sa — Medium-grade metamorphic rocks of amphibolite facies, Precambrian.
- Sgs — Low-grade metamorphic rocks of green schist facies, Precambrian.

- Approximate margin of orogen, dashed where inferred
- Contact between tectonic units, dashed where inferred
- Trend of fold axis
- Trend of structural grain from foliation of fold axes
- 15 — Subglacial contours (in hundreds of meters), after C.R. Bentley
- 30 — Strike and dip of bedding
- Strike of vertical bedding
- Horizontal bedding
- 60 — Strike and dip of foliation
- Strike of vertical foliation
- Active volcano

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