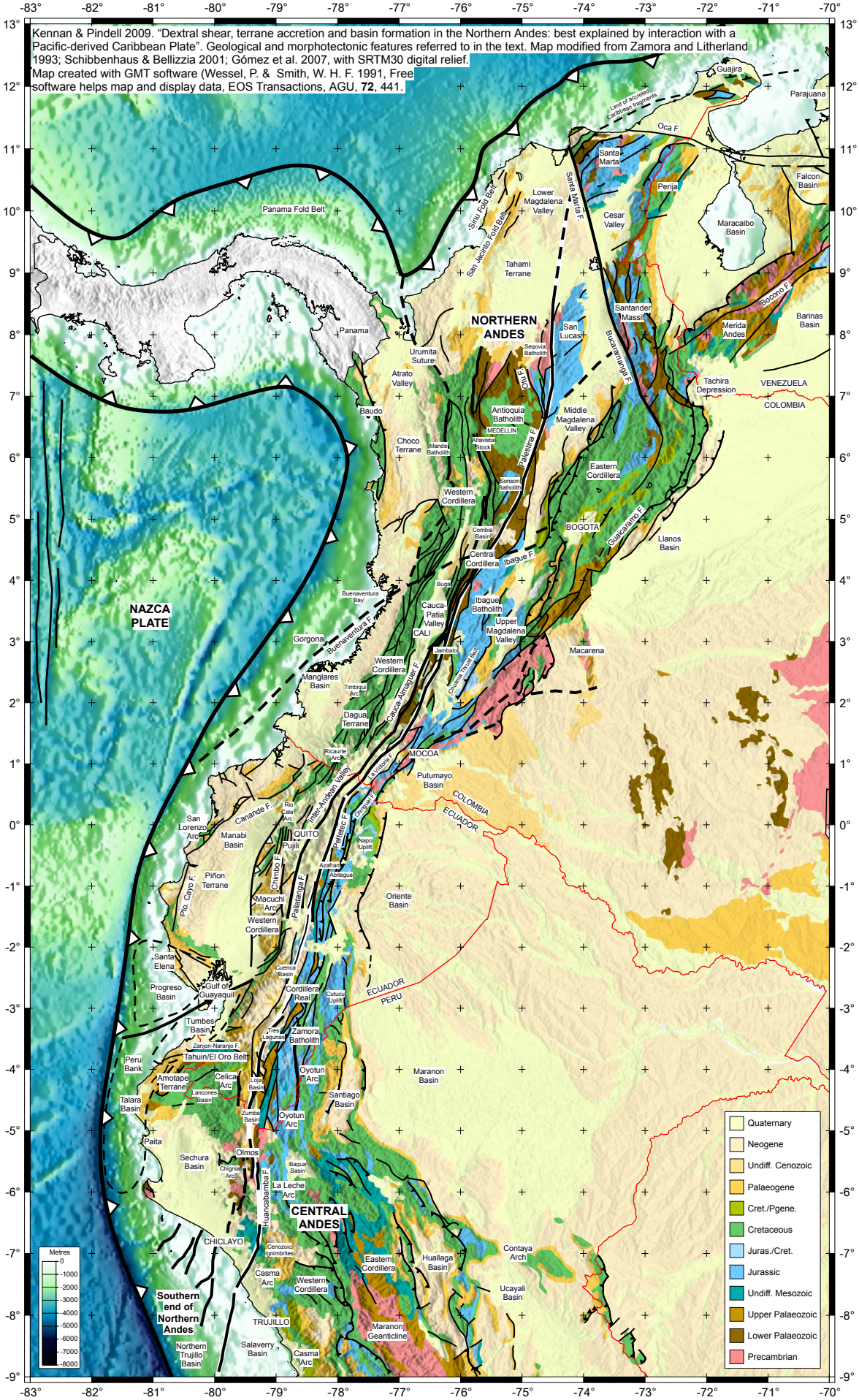
Kennan & Pindell 2009. “Dextral shear, terrane accretion and basin formation in the Northern Andes: best explained by interaction with a Pacific-derived Caribbean Plate”. Geological and morphotectonic features referred to in the text. Map modified from Zamora and Litherland 1993; Schibbenhaus & Bellizzia 2001; Gómez et al. 2007, with SRTM30 digital relief. Map created with GMT software (Wessel, P. & Smith, W. H. F. 1991, Free software helps map and display data, EOS Transactions, AGU, 72, 441.
NORTHERN ANDES
CENTRAL ANDES
NAZCA PLATE
Southern end of Northern Andes
Panama Fold Belt
Panama
Urumita Suture
Atrato Valley
Baudo
Choco Terrane
Mandé Batholith
Western Cordillera
Antioquia Batholith
MEDELLIN
Altavista Stock
Sonson Batholith
Central Cordillera
Cauca-Patia Valley
CALI
Buenaventura Bay
Buenaventura F.
Gorgona
Manglares Basin
Timbiqui Arc
Dagua Terrane
Cauca-Almaguer F.
Ricaurte Arc
Inter-Andean Valley
Rio Cala Arc
San Lorenzo Arc
Canande F.
Manabi Basin
QUITO
Pujili
Pallatanga F.
Chimbo F.
Pto. Cayo F.
Piñon Terrane
Macuchi Arc
Western Cordillera
Santa Elena
Progreso Basin
Gulf of Guayaquil
Tumbes Basin
Zanjon-Naranjo F.
Tahuin/El Oro Belt
Peru Bank
Amotape Terrane
Celica Arc
Lancones Basin
Talara Basin
Paita
Sechura Basin
Olmos
Chignia Arc
Huancabamba F.
La Leche Arc
CHICLAYO
Cenozoic ignimbrites
Casma Arc
Western Cordillera
TRUJILLO
Salaverry Basin
Northern Trujillo Basin
Eastern Cordillera
Huallaga Basin
Maranon Geanticline
Contaya Arch
Ucayali Basin
Maranon Basin
Santiago Basin
Oyotun Arc
Zumba Basin
Loja Basin
Cuenca Basin
Cordillera Real
Cutucu Uplift
Tres Lagunas
Zamora Batholith
Napo Uplift
Azafran Uplift
Abitagua
Putumayo Basin
Oriente Basin
COLOMBIA
ECUADOR
PERU
MOCOA
Chingual F.
La Vivista F.
Quebrada Troja Basin
Mambalo
Bugal
Ibague Batholith
Upper Magdalena Valley
Ibague F.
Central Cordillera
Combia Basin
BOGOTA
Guaicaramo F.
Eastern Cordillera
Llanos Basin
Macarena
Middle Magdalena Valley
Palestina F.
Otú F.
Seqovia Batholith
San Lucas
Bucaramanga F.
Santander Massif
Tachira Depression
VENEZUELA
COLOMBIA
Merida Andes
Barinas Basin
Rocono F.
Falcon Basin
Maracaibo Basin
Perija
Cesar Valley
Lower Magdalena Valley
Santa Marta
Santa Marta F.
Oca F.
Limit of accreted Caribbean fragments
Sinu Fold Belt
San Jacinto Fold Belt
Tahami Terrane
Parajuana
Guajira
Metres
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
Quaternary
Neogene
Undiff. Cenozoic
Palaeogene
Cret./Pgene.
Cretaceous
Juras./Cret.
Jurassic
Undiff. Mesozoic
Upper Palaeozoic
Lower Palaeozoic
Precambrian
-83°
-82°
-81°
-80°
-79°
-78°
-77°
-76°
-75°
-74°
-73°
-72°
-71°
-70°
13°
12°
11°
10°
9°
8°
7°
6°
5°
4°
3°
2°
1°
0°
-1°
-2°
-3°
-4°
-5°
-6°
-7°
-8°
-9°