0 250 500 750 1,000 Kilometers
Pacific Ocean
Pacific Plate
Philippine Sea
Philippine Plate
Sunda Plate
Sulu Sea
Celebes Sea
Australia Plate
Izu-Bonin Trench
Nansei Shoto (Ryukyu) Trench
Philippine Trench
Yap Trench
Mariana Trench
M8.1 1944
M8.3 1946
M8.1 1910
M8.2 1920
M8.0 1976
M8.3 1918
M8.0 1924
M8.0 1972
M8.1 1939
M8.2 1965
M8.2 1996
M8.1 1914
55 mm/yr
61 mm/yr
43 mm/yr
70 mm/yr
78 mm/yr
35 mm/yr
30 mm/yr
23 mm/yr
100 mm/yr
10 mm/yr
104 mm/yr
107 mm/yr
USGS
science for a changing world
Earthquakes (1900 - 2016)
Magnitude
Depth (km)
5.5 6 7 8 9
0 70 300 700
M 5.5 - M 9.0+
Slab Depth (km)
20 - 80 (20 km intervals)
120 - 160 (40 km intervals)
220 - 400 (60 km intervals)
460 + (60 km intervals)
Boundary Type
Plate Rate
Subduction
Divergent
Transform
Other
Aftershock Zones M8.3+ (None Shown)
Rupture Zones M8.3+ (None Shown)
120° 130° 140° 150°
30° 20° 10° 0°