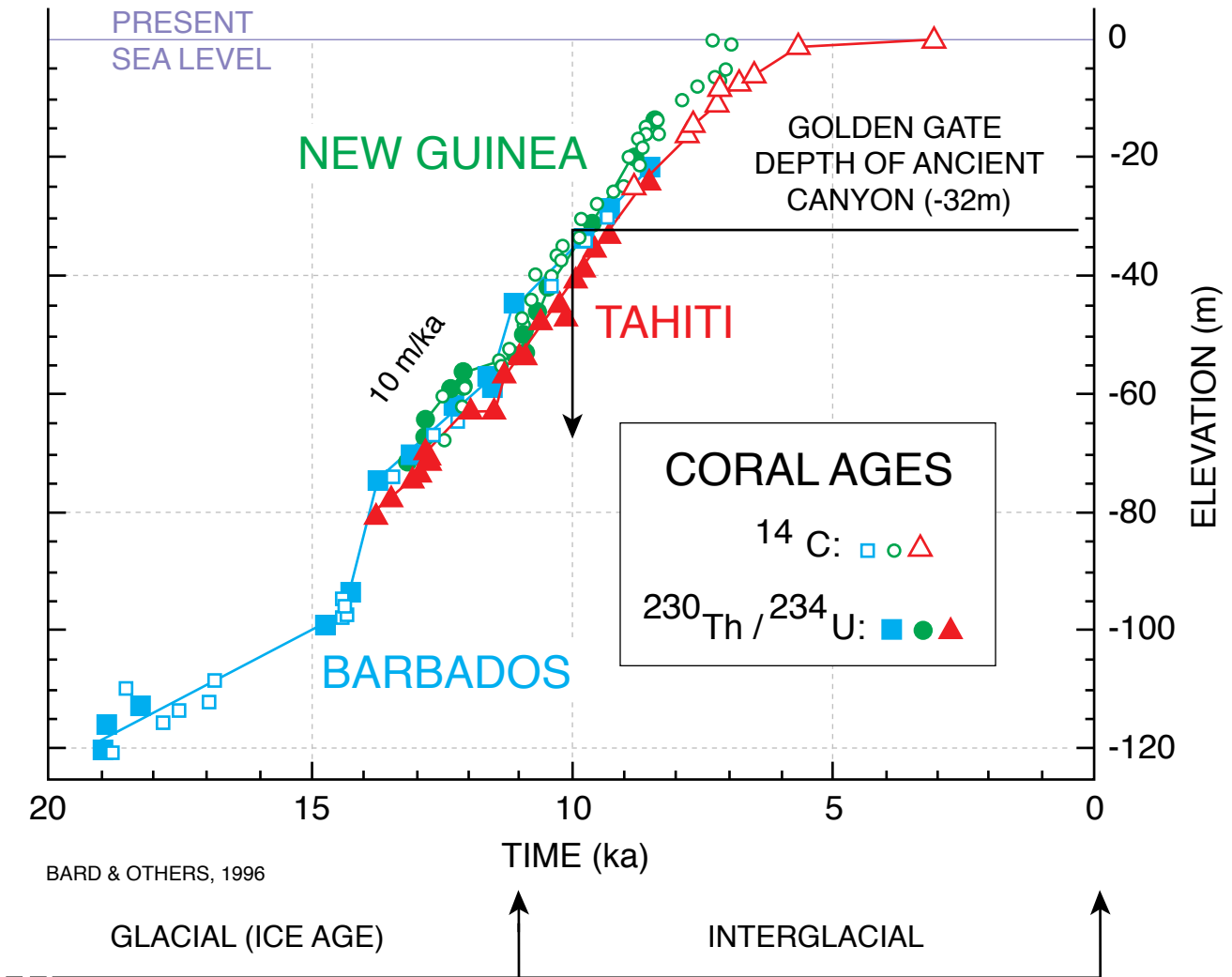


SEA LEVEL RISE AT THE END OF THE ICE AGE GAVE BIRTH TO SAN FRANCISCO BAY



The major climatic warming at the end of the last Ice Age caused about half of the continental glaciers to melt; the other half still exist in Greenland and Antarctica. The resulting meltwater flowed back into the oceans, causing sea level to rise about 120m. This diagram of radiometric ages from buried and submerged marine corals in New Guinea, Tahiti and Barbados yields a sea-level curve that shows the rates of sea-level rise over the past 20,000 years, from the last Ice Age to the present interglacial. The types of corals dated for this study lived 1-2m below the ocean surface, so are excellent indicators of ancient sea-levels. Between 15,000 and 5,000 years ago sea level rose about 100m, a rate of 10 meters per thousand years (10m/ka). Sea level has been at or close to its present position for only about 5,000 years. The rapid rise in sea level between 15,000 and 5,000 years ago flooded continental shelves world wide, creating numerous bays and estuaries. About 10,000 years ago sea level was high enough that the ocean began to flood the narrow canyon we now call the Golden gate, giving birth to San Francisco Bay. As sea level continued to rise, the ocean flooded several interconnected low-lying valleys to form the bay as we know it today. So, the bay is very young and has been close to its present size for only a few thousand years.