Marine Expeditions in Indonesia during the Colonial Years

Prepared by Herman Darman based on 2005 publication by van Aken

Corresponding author: herman.darman@shell.com

During the colonial years there was little support from the Netherlands government for non-applied scientific work. The colonies had to pay for themselves and had to be profitable for the Netherlands; science was not considered to be a good investment. Nevertheless, a number of important oceanographic expeditions took place, for example, the Siboga and Snellius expeditions. Both were named after the ships that carried the scientists and both were paid for by the Netherlands government. The objective was to prove that the Dutch Indies were not only the best governed, but also the scientifically most developed tropical colony. Moreover there were the Dutch who needed to consolidate colonial rule by showing the flag over the whole archipelago. Germans, British, Americans and Japanese were encroaching on the Far East (New Guinea, Philippines, Malaysia and Taiwan) and in some ways the expedition can be considered as 'gunboat science'. Even so, vast amount of prime oceanographical, hydrographical, biological and geological data were collected with state-of-the-art equipment.

The Siboga expedition (1899-1900, Figures 1 and 2) was executed with an adapted gunboat made available and paid for by the colonial government. It was very much biologically oriented (Figure 3), but useful oceanographical data were also collected. Some 238 depth soundings were added to the 50 already measured, but few purely geological data were collected. Of interest is the fact that a female scientist, Mrs. Weber-Van Bosse (Figure 4), specialist in algae, participated in the entire trip; she was probably the first woman in the history of oceanography to serve in such a role. She also was the wife of the leader of the expedition, the biologist Max Weber, but she fully earned her keep and published three monographs on the algae collected during the expedition. Amongst other things she proved beyond doubt, that coccoliths are of organic origin and belong to the algae (Weber-Van Bosse, 2000). She received an honorary doctorate from Utrecht University in 1910, another first in history for a Dutch woman.

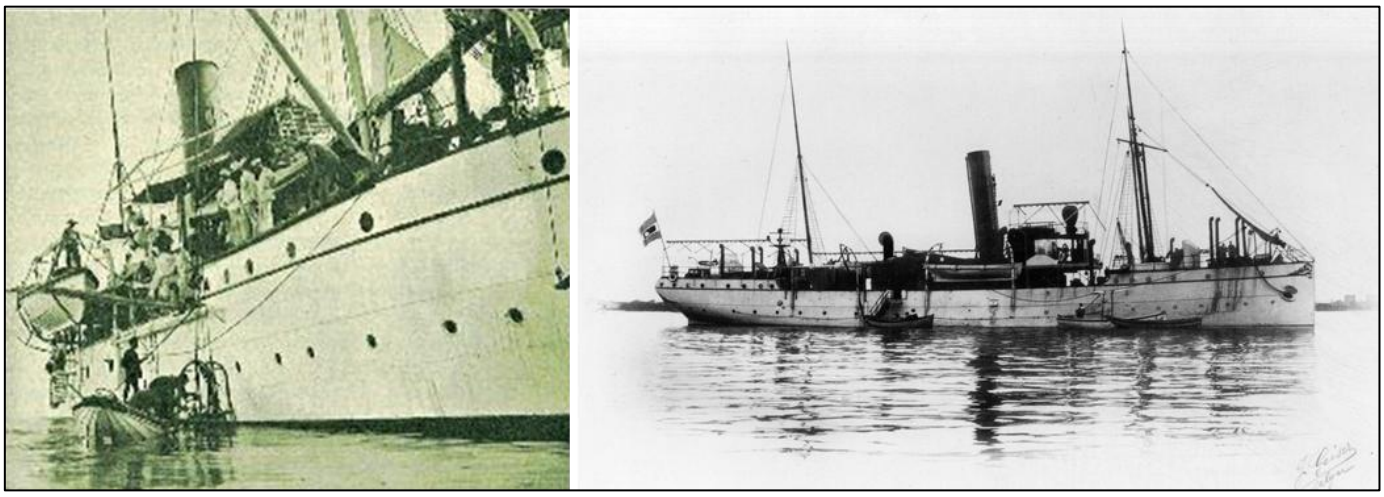


Figure 1. *The Siboga at sea (source: http://hydro-international.com & http://nl.wikipedia.org/wiki/Siboga-expeditie).*

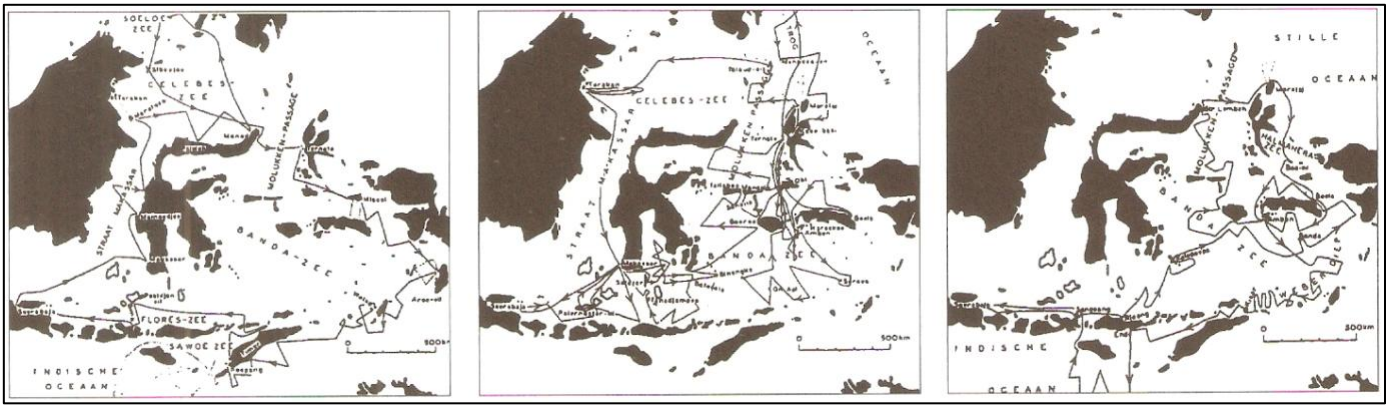


Figure 2. *The Siboga expedition trips 1, 2 and 3. (source: van Aken, 2005).*

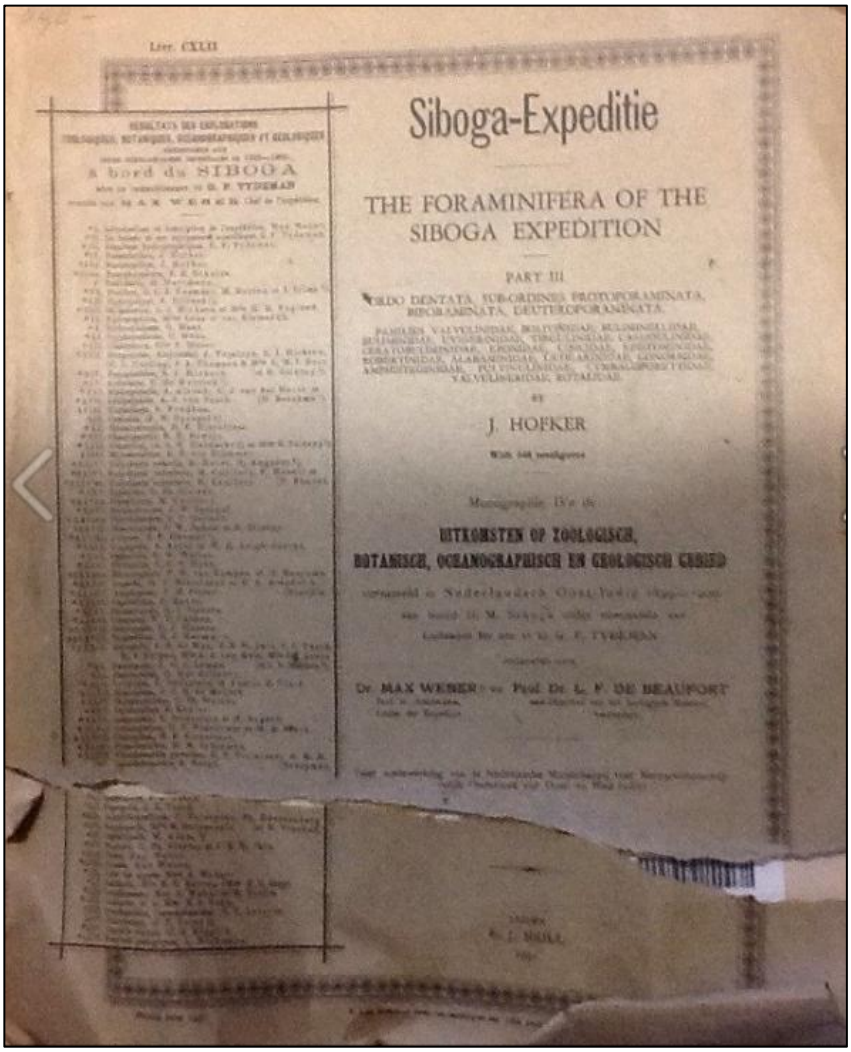


Figure 3. *Cover of a report from Siboga Expedition, a collection of the Naturalist Museum, Leiden, the Netherlands (photo by H. Darman).*

The Snellius expedition (1929-1930, Figures 4, 5 and 6) focused on the physical and chemical oceanography of the deep basins of the East Indies and the geology of its coral reefs. Again the government provided the ship, this time built as a scientific vessel, named it after one of the greatest Dutch scientists Snel(lius) van Royen and paid for the expedition expenses. The expedition leader was P. M. van Riel, a retired naval officer, head of oceanography and maritime meteorology at the Royal Meteorological Institute of the Netherlands (*Koninklijk Nederlands Meteorologisch Institut*, KNMI). On board was also Philip Kuenen (Figure 4), who was to become an internationally renowned sedimentological and marine geologist at Groningen University. A total of 374 station soundings were recorded and over 500 bottom samples were collected during three trips. Regular shore parties were organized to visit the coral islands and to study their geology. The echo sounder was in nearly constant use, resulting in 33,000 measurements and this alone immensely improved our knowledge of these deep-sea tract.

Study of the vast amount of data collected by the expedition was greatly delayed, especially as far as the purely oceanographic data were concerned, but also the geological and biological data proved too much to be quickly dealt with. This is aptly demonstrated by the fact that, as late as 1978, an article was published on the foraminifers from the Snellius expedition, as a final addition to the already published 23 volumes of Snellius reports (Figure 7).



Figure 4. *Left: Anne Antoinette Weber-van Bosse (1852-1942); Source: Wikipedia (left); and Right: Philip H. Kuenen (1902-1976); Source: http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn5/kuenen.*

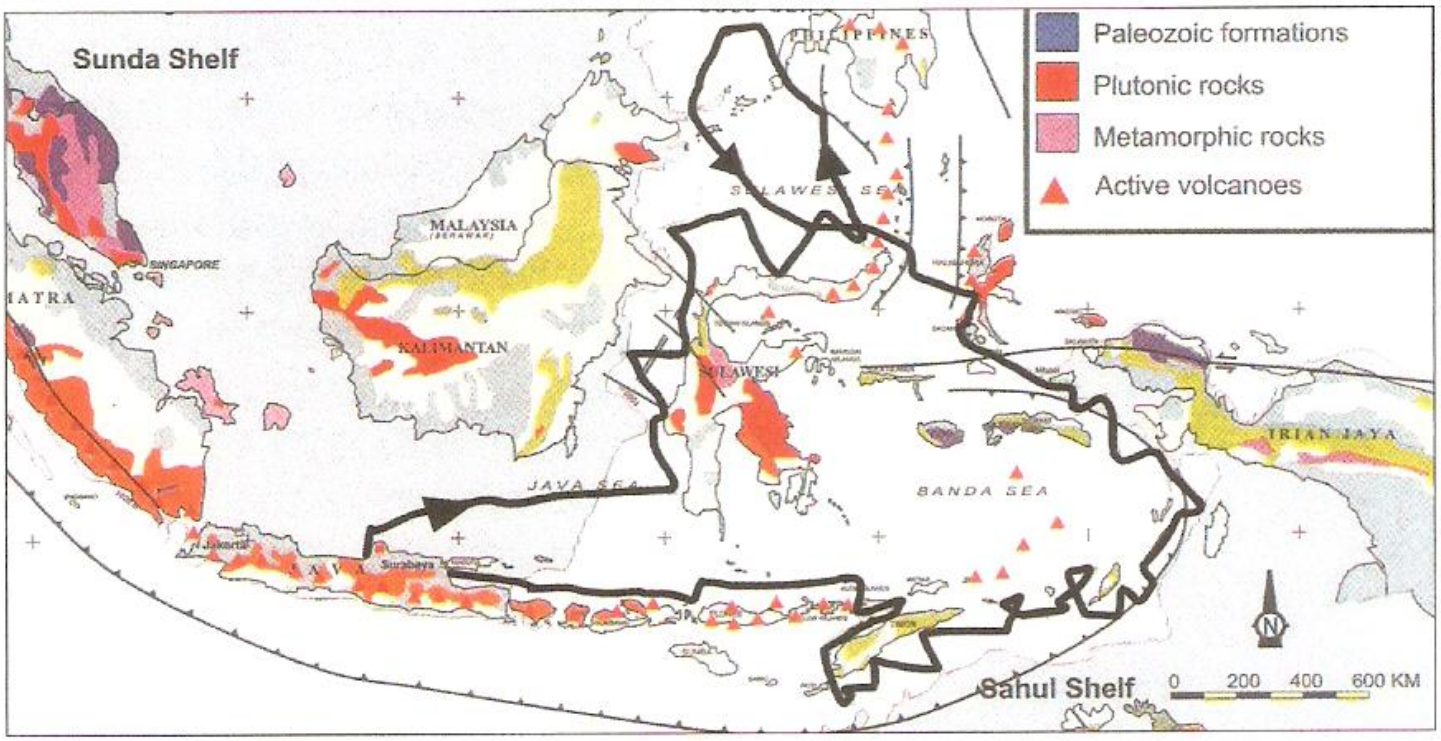


Figure 5. *Snellius expedition 1929-1930 (1st trip) (Boekschoten. et al., 2012).*

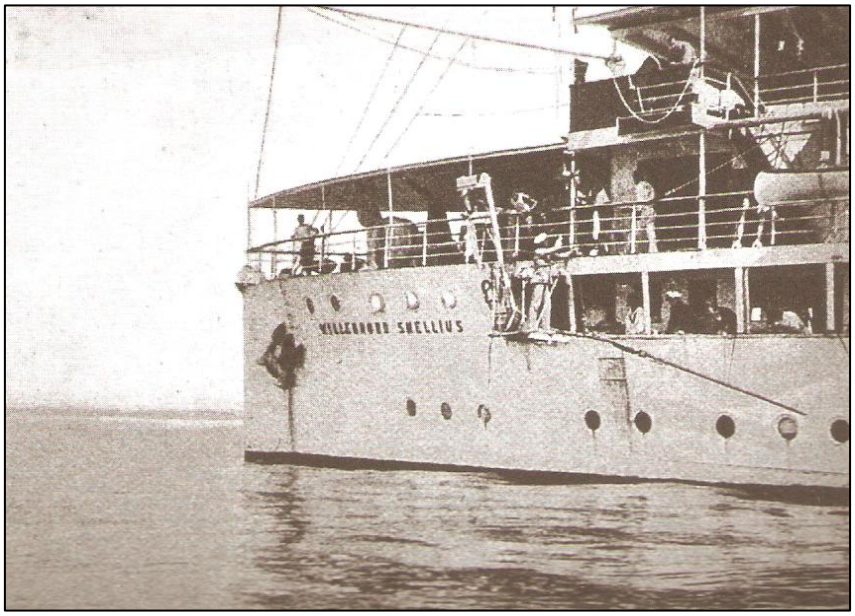
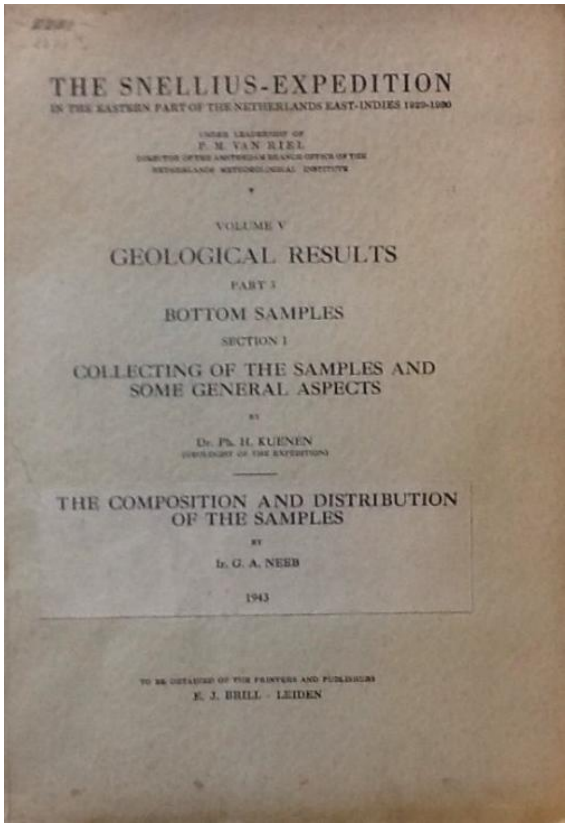


Figure 6. *The Hr. Ms. Snellius ship at sea (Boekschoten. et al., 2012).*


THE SNELLIUS-EXPEDITION

VOLUME V

GEOLOGICAL RESULTS

PART 3

BOTTOM SAMPLES

SECTION 1

COLLECTING OF THE SAMPLES AND SOME GENERAL ASPECTS

THE COMPOSITION AND DISTRIBUTION OF THE SAMPLES

1943

E. J. BRILL - LEIDEN

Figure 7. *Example of a Snellius expedition report in the Naturalist Museum, Leiden, the Netherlands (Photo by H. Darman).*

REFERENCES

Boekschoten, B. et al., 2012, Dutch Earth Sciences: Development and Impact, Royal Geological and Mining Society of the Netherlands, 1912-2012 Centenary Volume.

http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn5/kuenen)

http://hydro-international.com

http://nl.wikipedia.org/wiki/Siboga-expeditie

van Aken, H. M., 2005, Dutch oceanographic research in Indonesia in colonial times: Oceanography 18(4), p. 30–41.