

VU Amsterdam objects and their stories 1955–1960: The Biology education collection

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[photo for banner: shark preserved in spirits]

[caption: *Squalus* (spurdog) preserved in spirits, General Biological Supply House, Chicago, VU Heritage and Collections (photo by René den Engelsman, 2018)]

The Biology – later Ecology – collection is a treasure trove of extraordinary objects: some long forgotten, others still actively used and updated. Emeritus Professor and former Dean Nico van Straalen draws on his personal memories.

The beginning of the collection

By Liselotte Neervoort

In 1951, VU Amsterdam launched its degree programme in Biology with Professors [Jan Lever](#) (Zoology) and [Leendert Algera](#) (Botany). After a few years, they were joined by L. Kuilman (Plant Ecology) and [Karel Voous](#) (Animal Taxonomy). They made use of specimens in their teaching, as was the case everywhere at the time and in the preceding centuries. The collection of specimens grew, for example with the acquisition in 1956 of a collection of tropical fruit and seeds from the Royal Tropical Institute (the forerunner of the [Tropenmuseum](#)) for Kuilman's lectures. Taxidermied animals, skeletons, animals and plants preserved in spirits, herbaria with dried plants and algae, a collection of beetles and insects: the university continuously acquired whatever was necessary for teaching from researchers in the field.

With changes to the professional field of biology (for example, the rise of microbiology), the collection became less important, and it primarily served as decoration for the walls of the W&N building. However, the quality of the specimens degraded significantly over time – particularly the fluid for preserving specimens. When the VU heritage collections were reinstated in 2016, only a small number of the specimens in jars were still suitable for long-term preservation and [exhibitions](#). Now cleaned and restored by specialists, these specimens will be able to tell the story of biology at VU Amsterdam far into the future.

Memories: preserved specimen of a fish

By Nico M. van Straalen

For years as a Biology student, I kept a young spurdog preserved in spirits in a 125 ml milk bottle. I'd taken the creature from the fallopian tube of a viviparous spurdog that we had dissected in a lab for the Comparative Morphology of Vertebrates practical. Morphology used to be an important subject: nearly all of biology consisted of studying forms and structures, physical form, the location of internal organs and the structure of tissue. Every professor had a microscope in his office and also often a microtome and a fume cupboard, so that he could prepare specimens and study the richness of forms. I'm talking about 1970.

Later, the study of forms ([morphology](#), [anatomy](#), [histology](#)) more or less disappeared from the field of biology. We knew what animals looked like inside and out, and if you didn't know, you looked it up in a reference book. In those days, the Faculty of Biology kept a huge collection of all kinds of animals in spirits in jars and bottles in the teaching storeroom. This is the old-fashioned kind of biology, I used to think whenever I came into that storeroom. There was an unpleasant penetrating smell of formalin and alcohol. All different species of fish stared back at you through the glass with dead eyes. In one corner there was a pile of sheets with dried algae, covered with the dust of time, and the cupboards were stuffed full of skeletons of different species of birds.

'What this field needs is precision', was what I thought when I was a Biology student, and I went on to combine biology and physics. I wanted to know how things worked, experiment and develop models. I kept the preserved spurdog for a long time, but then I forgot about it and ultimately it got lost. No one cared any



more about the collection of smelly biological objects. The Biology collection was still there in the 'formalin room' in the BK hall, but that door was hardly ever opened any more. You could find everyone upstairs, in the lab, busy with precision equipment you could use to measure every part of an animal. Later on, it even became possible to isolate the DNA from biological material, and molecular life sciences were being developed at the speed of light. The Biology collection was gathering dust and hardly ever used for teaching. Ultimately, it became a permanent exhibition that was shown for years in a large display case that graced the stairwell in the FI hall.

It's interesting that the study of forms has become completely modern again, if only from the perspective of developmental biology. How do all those forms originate from the fertilised ovum, and which genes control growth and development? [Stem cell](#) biology and [epigenetics](#) have become subjects that speak strongly to the imagination. We're only now coming to understand the phenomenon that [Charles Darwin](#) could only admire in 1859, the question why 'from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.' That's why I'm in favour of at least conserving a keepsake in the VU Amsterdam archives – even if it's just one baby spurdog preserved in spirits – to remember the old biology, as well as what now also forms the basis of the new biology.

[Nico M. van Straalen](#) is Emeritus Professor of Animal Ecology and former Director of Teaching at the Faculty of Sciences. Liselotte Neervoort is Vrije Universiteit Amsterdam's Academic Heritage Curator.

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