

THE VIVIPAROUS
EELPOUT is often
reproduced as a
fishing lure.



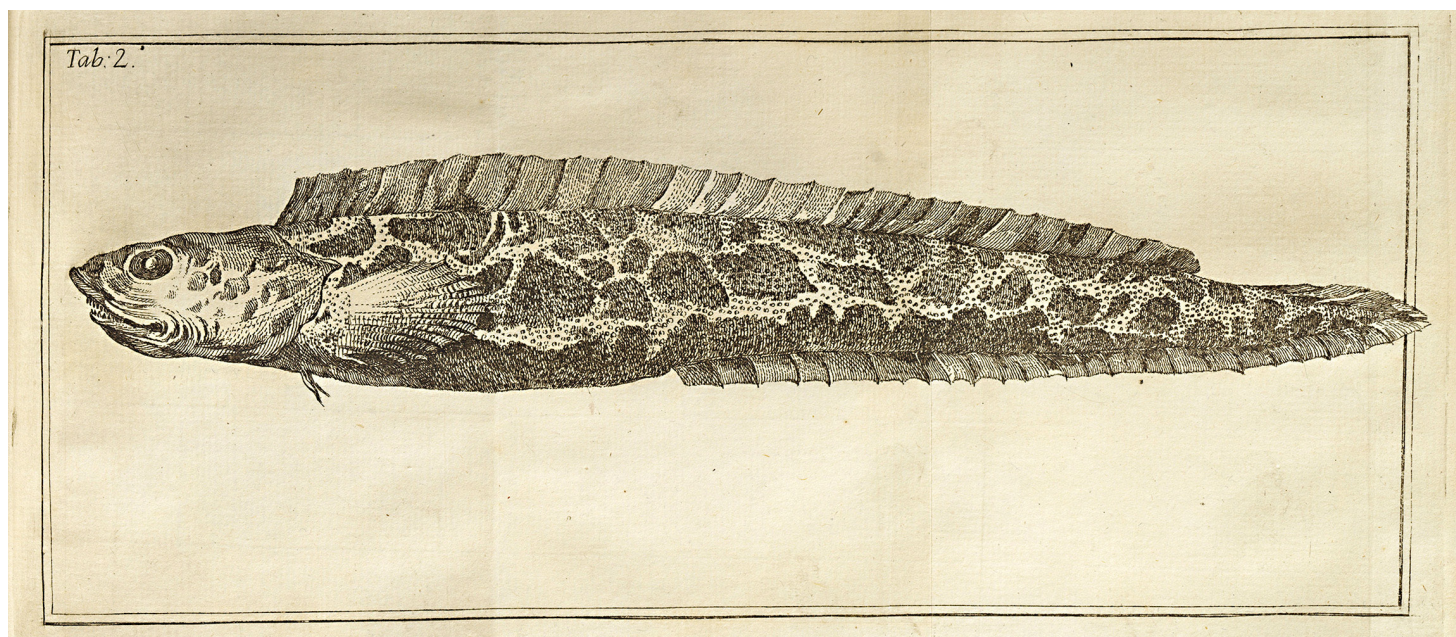
The rank and file of the Academy of Sciences

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Nils Gissler's viviparous eelpout (*Zoarces viviparus*) did not look at all special when first depicted as a Swedish species, on a fold-out illustration in *Vetenskapsakademiens handlingar* [*Transactions of the Academy of Sciences*] in 1748. The Academy's engraver had created the picture using the eelpout that Gissler had sent in, preserved in alcohol, along with a descriptive text. Shown at full scale, the fish's long body has fallen somewhat outside the illustration's frame, but that does not appear to matter.

It was not really a sensational find. The little viviparous eelpout lived throughout the Bothnian Sea and, all along the coast, was known in Swedish as *tånglake*. Strangely, it seemed as if "storms and bad weather approached" as soon as it showed itself, but there was not so much more to report. Gissler stated laconically: "The entire fish is smooth and slippery, with small dense, pressed, round and grey spots." It was of little interest from a domestic perspective: "No one wants to eat him, but rather everyone regards him as an abomination and throws him straight out of the fishing nets." Gissler placed it in the *Blennius* genus – hardly a controversial decision because others had previously made the same assessment. There were, however, those who felt that the viviparous eelpout instead belonged to a genus in the cod family. The issue had not been completely investigated.

The question was simply what Gissler's efforts were worth. When his description was first discussed at an Academy meeting, it was decided to refer it to Carl Linnaeus and his friend Abraham Bäck, resulting in them each publishing a comment alongside the article. Linnaeus stated that the viviparous eelpout was already known among fish experts. Bäck added that he had both seen and described the eelpout seven years previously, when one had



VIVIPAROUS EELPOUT depicted in *Transactions of the Academy of Sciences* in 1748.

been caught in his hometown of Söderhamn. They felt that benefits lay in its thorough and correct description being made public, due to the publication of the text and illustration in the *Transactions*, as well as the argument for placing the viviparous eelpout in the *Blennius* genus.

Despite the somewhat grudging comments, Gissler was elected a member of the Academy in April 1748, shortly after his observations about the eelpout were published. His proposal for election had been based on another text he had submitted for publication in the *Transactions*, an article about the economically important herring fishing in Norrbotten, which was submitted that Midsummer. It must have already been obvious that, in the 33-year-old Gissler, the Academy of Sciences had found one of its most dedicated supporters. Only one of 35 members voted against him.

Gissler had reported his observations of the viviparous eelpout and herring fishing from Härnösand, where he had arrived a few years earlier to take employment as a teacher of logic, physics and medicine at the town's college. He had been educated in Uppsala, where he first focused on theology, something he soon gave up, instead concentrating on medicine. He graduated with a doctorate in 1744, by which time he had already been awarded the teaching position in Härnösand.

Once in Härnösand, Gissler became feverishly busy. He created a botan-

ical garden and started collecting specimens. It turned out that there was a lot worth keeping, so his collection soon grew to a considerable size. His first article was published in the *Transactions* in 1747: a piece on the long-debated issue of the observed drop in water levels in the Baltic Sea and its causes.

This success must have given him a taste for more, because over the following years Gissler's findings were submitted in a steady flow. These were everything from a description of how to make a particular type of fermented milk, to a report about an earthquake in Härnösand in March 1748. Of greater economic interest was his long and thorough article series on salmon fishing in 1751, which also spilled over into 1752. He continued teaching throughout this period. Using his medical qualifications, he also ran a clinic, where he is said to have been particularly warm-hearted, even producing medicines at his own expense. The success of his practice was confirmed in 1762, when Gissler was named provincial physician. Nor did he object to testing out innovations such as electrotherapy; he is said to have "electrified" patients on a daily basis, as well as to have succeeded in curing blindness by applying an "electrical blast" to the eye.

He soon became far more useful to the Academy of Sciences than simply as a writer of articles. After the almanac monopoly was established in 1749, Gissler wrote to permanent secretary Wargentín, with whom he had been "on intimate terms" since childhood, informing him that he had succeeded in disposing of 600 almanacs at once and that the rest would probably go too. This appears to have been more troublesome and, after Gissler's death, the Academy forgave a debt of 142 daler and 16 shillings in copper coins for almanacs donated to a poor bookbinder who had then gone bankrupt.

Still, it is apparent that he not only communicated findings and observations to the Academy of Sciences in Stockholm, but that he also, through colportage and almanac distribution, ensured that the Academy of Sciences' printed wisdom reached people in the provinces. Naturally, the almanacs not only published calendar information such as sunrise and sunset, the phases of the Moon, weather forecasts and the appropriate days for agricultural tasks, they also included longer articles of general interest. In this way, Gissler participated in a kind of knowledge circulation in its true sense, a transfer that not only went in one direction, from a northern bishopric to the capital, but which in return also provided authorised printed materials full of information.

Gissler also helped with astronomical observations. The first were made in 1751, when he assisted with observations to determine the lunar parallax, primarily supporting Nils Schenmark, an astronomer from Lund University, who had travelled all the way up to Härnösand to make the necessary observations. Two years later, Gissler observed the transit of Mercury and then it was time for the grand finale, the first transit of Venus in 1761 and the second

in 1769, when a large number of observations were made in various places. He was thus part of the network of astronomical observers that the Academy of Sciences mobilised on such occasions. Wargentín also ensured that Gissler was one of those who was able to borrow objectives, tubes and micrometers, as well as reliable clocks, so the observations were sufficiently accurate. These were often instruments that could be kept and, once again, we see how Gissler fits into a circulation of knowledge that not only included printed matter, but also instruments that increased the potential for precise observation.

Still, Gissler also experienced setbacks. Such as 1768, when he reported that a fly had regenerated both legs and wings; this time his findings were refused by the Academy without further ado. Gissler was not always entirely discerning, not even with that era's perspectives. For example, he believed that sea mists were the origin of both thunder and the northern lights. Many people reacted to the numerous oddities and paradoxes in Gissler's explanations about one thing or another.

However, Gissler's contributions to the Academy's *Transactions* continued to flow in. Their breadth was overwhelming. Skuas' eating habits, the life of beavers and a salve for reindeer sickness, consisting of cream of tartar and saltpetre, were all dealt with in the same frenzied manner. A teaching colleague in Härnösand, Magnus Stridsberg, had invented a threshing sledge in the mid-1750s; according to the Academy of Sciences it was particularly efficient and was something Gissler also covered in an article.

Despite his intellectual range, there was one area that particularly interested Gissler: the weather. He kept meteorological diaries that were also, at least sometimes, sent to the Academy of Sciences. But compared to everything else he published, his weather observations did not lead to as much, even if he was occupied with a large meteorological handbook towards the end of his life. His efforts seem to have been overshadowed by an inadequately critical attitude to some ideas, such as a set of certain rules for weather forecasts.

But this must not stand in the way of one definite conclusion: that the successes of the Academy of Sciences in the 18th century, and far into the 19th century, largely built upon the efforts of the many relatively unknown, but broadly scientifically interested members who, like Gissler, provided advice and action to the Academy's various projects, just as much as they were occupied with their own initiatives for the good of its activities. Without all these teachers and priests, doctors and officers who functioned as nodes in a national and international system for the circulation of knowledge, in which the Academy of Sciences was the pumping heart, the Academy would never have had any activities at all. Gissler's contributions also show that the circulation of knowledge was not abstract, but was rather concretely materialised in items such as almanacs, astronomic instruments, and a viviparous eelpout preserved in alcohol.

It is easy to forget the overwhelming majority of members, ones who never had their portrait painted and hung in the halls of the Academy of Sciences, never had a medal embossed in their memory, a medallion cast or a statue erected. None of these numerous shadow figures have ever been close to being appointed permanent secretary or president. At the most, they have been honoured with a eulogy after their death; during Nils Gissler's memorial speech, even the speaker is said to have shed a tear. But all these unknown members have also contributed the Academy of Sciences' history. Yes, it is justified to say that they were the Academy of Sciences' rank and file.

In Gissler's case, it is apparent that his fieldwork, astronomical and meteorological efforts were of great significance for the Academy of Sciences' reputation during the 18th century. He had time to publish no fewer than 28 different articles in the *Transactions* before his death in 1771. Added to this were all his other efforts with almanac sales and observations of various astronomical and meteorological phenomena. In this context, an illustration of a viviparous eelpout can be said to represent something much greater than just a small inedible fish.

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Not a lot has been written about Gissler. Apart from the memorial speech by Anders Schönberg at the Academy of Sciences on 6 June 1772 and biographies in reference books such as *Svenskt biografiskt lexikon*, volume 17 (Stockholm, 1967–69), information has been taken from Sten Lindroth's *Kungl. Svenska Vetenskapsakademiens historia* (Stockholm, 1967). What Lindroth has to say about Gissler is spread out, so the index is invaluable if you want to look up the information. The article about the viviparous eelpout is in Nils Gissler, "Beskrifning på tånglaken", *Vetenskapsakademiens handlingar*, 1748, 37. A list of all Gissler's articles in the *Transactions* is found in A. D. Ståhl, *Register öfver Kongl. Vetenskaps-Akademiens Handlingar ifrån deras början år 1739 till och med år 1825* (Stockholm, 1831), 83–84. Other unrecognised Academy members who have been the subject of biographies are Daniel Næzén in Henrik Sandblad's *Världens nordligaste läkare: Medicinalväsendets första insteg i Nordskandinavien 1750–1810* (Stockholm, 1979), Pehr Högström in Gunnar Wikmark's *Pehr Högström: En storman i Norrlands kulturliv* (Stockholm, 1979) and Clas Bjerckander in Kerstin Ekman's *Då var allt levande och lustigt: Om Clas Bjerckander – Linnélärjunge, präst och naturforskare i Västergötland* (Stockholm, 2015).