

*An Entomologist of the Eighteenth Century:
Johann Christian Fabricius*

JACK W. DICKEY

The annals of the history of science are filled with stories of men who in their own lifetime were well known and respected men of science, but whose memory has been almost obliterated by the progress of science. Often they are victims of their own success. Their work has opened new fields or established new methods which have been developed further by their successors until their original work is obsolete. Once widely known in the scientific community they are now relegated to a paragraph in an encyclopedia, or perhaps have their names perpetuated by being attached to some scientific law or effect.

In the collections of The University of Iowa Libraries one can find representative works of many such men. These books, once a vital part of the current scientific literature, are now chiefly of interest to the historian of science. On coming upon them in the library one wonders about them and their writers. Often, on pursuing this curiosity further, the story of an interesting personality is uncovered. One such man is Johann Christian Fabricius, a Danish professor of economics who, for his work in the late eighteenth century, is recognized as one of the founders of systematic entomology. Since it is almost entirely for his entomological work that he was recognized during his lifetime and for which he is remembered at all today, little mention will be made here of his work in other fields.

In 1805, three years before his death, Fabricius published in Danish his autobiography, which reveals a picture that in many ways resembles the academic life of today. This autobiography, translated by F. W. Hope and published in the *Transactions of the Entomological Society*, vol. 4, 1845, pp. i-xvi, constitutes the principal source for details of Fabricius' life.

Born in Tondern in the Dukedom of Schleswig, on the 7th of January, 1745, he was the second and last son of Johann Christian Fabricius, who held the position of physician for the city and county. His

early education was obtained at home from his father and a series of tutors. He took an early interest in collecting and classifying plants and insects, and studied Linnaeus' *Species Plantarum* and *Philosophia Botanica* far more diligently than Cornelius or Cicero. In 1761 he was sent to high school in Altona to prepare for his entrance to college in Copenhagen the next year.

That autumn, much to his delight, his father sent him to Upsala to study under Linnaeus. There he was to remain for two years, during which time the foundation for his work in entomology was laid. While at Upsala, he studied only under Linnaeus. He had expected to attend also the lectures of Johann Wallerius on mineralogy and chemistry. However, Wallerius was not on friendly terms with Linnaeus; and Fabricius, to show his admiration for Linnaeus, pointedly attended only his lectures. He studied hard at Upsala and left there a devoted disciple of the Linnaean school of science.

On returning to Copenhagen in the winter of 1764, he began to work on his system of insect classification and did not attend any lectures. His father, while not interfering with his work, decided it was about time his son thought about his future and tried unsuccessfully to get him a teaching appointment. He did succeed in sending Johann the next year to Leipzig to study economics, which was to be his proper field. However, he was still able to devote a considerable amount of time to his insect collecting and traveling. In the autumn of 1766 he was in Leyden and by the next spring in Edinburgh, where his brother was studying medicine, to start a trip through Scotland and England which lasted the rest of the year. In January his father procured for him the Professorship of Economy of the Natural History Theatre of Charlottenburg with the provision that he might travel two more years before taking up his teaching duties.

After spending most of 1768 in England, with a short stay in Paris, he was on the road again traveling through Italy, Austria, Switzerland, and Germany before reaching Copenhagen late in the autumn of 1769. On taking up his teaching duties he found that the situation at Charlottenburg was not as he had hoped. His lectures were not well attended, and to make things worse reorganization was in the wind. In the summer of 1771 the Natural History Theatre was abolished, and after several false hopes he ended up as Professor Extraordinary at the Academy of Copenhagen. Here he remained until 1775, lecturing in Copenhagen in the winter and spending summers in England working on his system of insect classification.

At Easter time in 1775 his first book on entomology, *Systema Entomologiae*, was published. Systematic entomology was then in its infancy. In his *Systema Naturae* Linnaeus had used the wings of the in-

sects as a basis for his classification scheme, which Fabricius considered to be incomplete as well as not the most natural classification. In this book Fabricius adopted the mouth organs as a basis for a new classification scheme which had better-defined classes and a large number of described genera. In spite of the difficulties caused by the smallness of the mouth parts, his system was soon adopted by most of the entomologists of Europe.

The year 1775 saw several changes in his life. His father's death early in the year had left him with a small inheritance, but even this added to his small salary was not enough to support his growing family. He had married in 1771 and now had two small children. He was therefore compelled, unwillingly, to accept a position as Professor of Natural History, Economy, and Finance at Kiel which paid a better salary. He had been promised facilities for his entomological work, but because of finances these never materialized. To overcome the lack of local entomological materials, he began to take every opportunity to travel for the purpose of viewing other collections.

In the next few years he seems to have found time for travel and writing. In the summer of 1778, aided by a government grant, he made a trip to Norway, and in 1780 he was in England studying some of the collections he had seen before, but which had grown in the intervening years. In 1776 his *Genera Insectorum*, which contained the natural definitions of the species, was published. Two years later in his *Philosophia Entomologica*¹ he attempted to establish the theoretical principle of entomological classification. In 1782, after an interlude during which he published some work on economics, appeared his *Species Insectorum*, a two-volume supplement to the *Systema Entomologiae*.

By 1782, again finding his salary insufficient to support his growing family, he sought a position in England and submitted his resignation to the authorities at Kiel. Instead of accepting his designation they offered him a substantial increase in salary and he agreed to stay. He did go to England for a visit that year, however, and followed it up with trips to Russia, Germany, Austria, and France in the next few years. As a result of his work in St. Petersburg and Vienna, he published the two-volume *Mantissa Insectorum* in 1787.

With the years Fabricius was becoming more dissatisfied with this position at Kiel. He felt others had been given preferential treatment when it came to promotions and salary increases, and the old matter

¹ *Philosophia Entomologica Sistens Scientiae Fundamenta Adiectis Definitionibus, Exemplis Observationibus Adumbrationibus*. Hamburg, 1778. This work by Fabricius and the titles cited in the following footnotes at present form part of the collections of the Zoology Library at The University of Iowa.

of lack of assistance in his entomological work still bothered him. Therefore, in 1789 he asked for and received retirement at half pay. To everyone's surprise his students petitioned him and the administration to reconsider, which they both did. Although he considered leaving at other times, he never did, and he remained at Kiel for the rest of his life.

During a trip to Paris in 1790 his daughter was injured in a fall and died after a long illness. After the girl's death his wife's health began to fail, and they found Paris a more suitable place for her to live than Kiel. From this time until his death in 1808 Fabricius spent his winters teaching in Kiel and his summers in Paris. In 1792 the first volume of *Entomologia Systematica*² appeared. This four-volume work in which he updated and expanded his *Systema Entomologica* was completed by 1796, but two years later in 1798 it was necessary to publish an additional volume, the *Supplementum Entomologicae Systematicae*.³ This was to be the last attempt at a comprehensive coverage of the insects. From now on he was to concentrate on one class of insect at a time. The first of these books, *Systema Eleutheratorum*,⁴ appeared in two volumes in 1801. Only nine years before in *Entomologica Systematica* the class Eleutheratorum had contained 117 described genera. Now the number had reached 181. Similar increases can be noted in the last three books that he published: *Systema Rhyngotorum*, 1803;⁵ *Systema Piezatorum*, 1804; and *Systema Antliatorum*, 1805.⁶

Even before his death the system that Fabricius had labored on for so many years was being abandoned by other entomologists. It was becoming apparent that a system based on only one characteristic was not possible. Some entomologists had continued to work with the original Linnaean system, which they were able to modify and expand into a more usable form. Although his system has long been abandoned and only one of his classes is now recognized, Fabricius is still known for the great number of insects that he described, many of which still bear the names that he gave them.

² *Entomologia Systematica Emendata et Aucta, Secundum Classes, Ordines, Genera, Species, Adjectis Synonymis, Locis, Observationibus, Descriptionibus*. Copenhagen, 1792-94.

³ *Entomologia Systematica Emendata et Aucta. Supplementum*. Copenhagen, 1798. With this is bound his *Index Alphabeticus in Supplementum Entomologiae Systematicae* of 1799.

⁴ *Systema Eleutheratorum Secundum Ordines, Genera, Species, Adiectis Synonymis, Locis, Observationibus, Descriptionibus*. Kiel, 1801.

⁵ *Systema Rhyngotorum Secundum Ordines Genera, Species, Adiectis Synonymis, Locis, Observationibus, Descriptionibus*. Braunschweig, 1803.

⁶ *Systema Antliatorum Secundum Ordines, Genera, Species, Adiectis Synonymis, Locis, Observationibus, Descriptionibus*. Braunschweig, 1805.

IOH. CHRIST. FABRICII

PROF. HIST. NAT. OPON. ET CAMERAL. SOC. REG.
HAFN. NORW. ET BEROL. SOC.

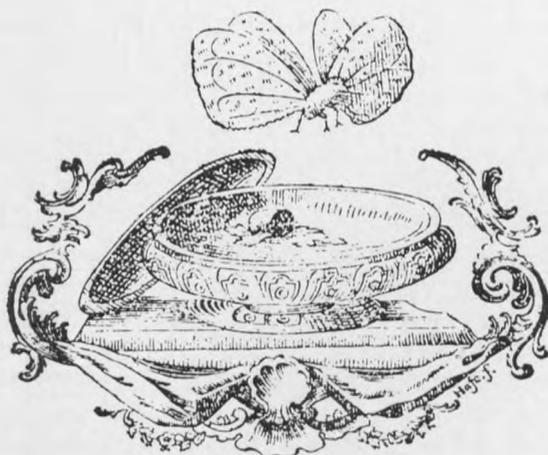
PHILOSOPHIA
ENTOMOLOGICA

SISTENS

SCIENTIAE FVNDAMENTA

ADIECTIS

DEFINITIONIBVS, EXEMPLIS, OBSERVATIONIBVS
ADVMBRATIONIBVS.



HAMBVRGI et KILONII

IMPENSIS CAROL. ERNEST. BOHNII

MDCCLXXVIII.

Title page of a volume by the eighteenth-century Danish entomologist Fabricius, dated 1778.