

Article IX.—NICOLAS PIKE AND HIS UNPUBLISHED PAINTINGS OF THE FISHES OF MAURITIUS, WESTERN INDIAN OCEAN, WITH AN INDEX TO THE FISHES

BY E. W. GUDGER

On August 18, 1866, the United States steamer 'Monocacy' weighed anchor from the navy yard at Washington, D. C., for a voyage to the Indian Ocean, carrying with her Nicolas Pike, who had been appointed United States consul for the island of Mauritius, at which she arrived on January 12, 1867.

Nicolas Pike was born at Newburyport, Mass., January 26, 1818. His people had lived in that part of Massachusetts and the adjacent section of New Hampshire since 1635, and had been prominent in the civic, military, and cleric annals of these colonies and states. Nicolas attended the Latin High School at Newburyport, but was not a particularly good student in the classics, his mind turning rather to natural history. The family's military bent also showed in him—as it is recorded that when he became grown he contemplated going into the army, but was dissuaded therefrom. Just here there is a hiatus in his history, and we next find him in Brooklyn in 1848.

Several sources give the information that Pike came to New York or to Brooklyn in 1839, at the age of twenty-one. This may be correct and, if so, it is probable that he had some clerical position. The Brooklyn and New York directories show that about 1848 and 1850 Pike was engaged in the manufacture and importation of paper hangings, with offices in New York, but that he lived in Brooklyn. These, then, are the brief facts available about his business life.

From various sources I get scattered data as to Pike's scientific activities. As early as 1849 he was a diligent student of marine algæ and in that year he was made president of the Brooklyn Natural History Society. In 1852, through the influence of Daniel Webster (who was a friend of his family) he was appointed consul to Oporto, Portugal, a position he held until 1861. Here he seems to have pursued his botanical studies to such good end that the Portuguese government asked him to visit the vineyards in certain sections and study the grape fungus disease. This he did, discovering that sulphur was a remedy. This brought him marked recognition from the government of Portugal. He does not seem to have published anything on this subject, but in the Report of

the Commissioner of Patents for 1855 (Washington, 1856) in the volume on 'Agriculture,' there is, on pages 302-304, a short letter from Pike on the 'Decrease of the Wine-Culture in Portugal' due to the fungus disease.

Returning to the United States in 1861, at the breaking out of the war between the states, in keeping with his family traditions, Pike at once offered his services to the government. He was commissioned lieutenant-colonel and, as such, was active in recruiting troops and in training raw volunteers at a camp of instruction at Williamsburg, Long Island. In 1865 he seems to have again resumed his natural-history studies, lecturing before the Long Island Historical Society on the influence of blue light on algæ. About this time he was elected president of the Microscopical Society. He seems to have lead an especially active life at this period.

In 1867, as stated previously, Pike reached Mauritius and at once entered actively and efficiently into his duties as United States consul, and likewise began his interesting natural-history studies. One of the first things he did was to write 'An Account of a Cyclone, January 6 and 7, 1867, Encountered by the United States Steamer, "Monocacy," while on her Passage from Simon's Bay to Mauritius in the Indian Ocean.' This was published in the Report of the Smithsonian Institution for 1867 (Washington 1868, pp. 477-481).

While at Mauritius, Pike published eight scientific articles: the account of the cyclone above noted; two articles on the fishes of Mauritius; and five dealing with the fauna, flora, and geology of the island. All save the first appeared in the Transactions of the Royal Society of Mauritius, but, as no set of this publication is to be found in the United States, I have been unable to look up these articles.

After his return to the United States in 1874, Pike seems to have published an occasional scientific paper, at least I have been able to get the titles of five: one on the reproduction of the eel in 1880; three on North American amphibians (2 of these in the Bulletin of the American Museum); one on marine algæ (all published in 1886); and another in 1892 on the ravages of a moth on the trees in Brooklyn.

Pike is, however, the author of one book, entitled 'Subtropical Rambles in the Land of the Aphanapteryx. Personal Experiences, Adventures, and Wanderings in and Around the Island of Mauritius' (New York and London, 1873, 509 pages, plates and text figs.). This book is filled with interesting and valuable natural-history observations of all kinds, those on the fishes being most in point just here. Curiously

enough in his preface (dated Port Louis, Nov., 1872) Pike says: "In a second volume, nearly completed, I purpose treating more fully on the fauna and flora of Mauritius." Possibly the fish drawings, presently to be considered, were made with a view to their being worked up in part at least for illustrations in this book. I have sought diligently to find this manuscript, running down every possible clue, but I can find no trace of it, nor indeed any person who has even heard of it.



Fig. 1. Nicolas Pike, age about 54. This is a copy of the frontispiece to his book, 'The Land of the Aphanapterx.' It is presumably made from a photograph taken in Port Louis about 1872.

The frontispiece to 'The Land of the Aphanapteryx,' reproduced herein as Fig. 1, is made from a photograph of Pike seated amid a collection of his land and sea gatherings. He has on his feet a pair of long heavy wading boots which he speaks of always wearing when collecting on the reefs about Port Louis. Beside him is his little dog "Quilp," which accompanied him everywhere in Mauritius. This photograph shows him to have had a strong, vigorous body, and the countenance is that of a man of great resolution.

Pike made extensive collections of natural-history objects in Mauritius. Some of these went to the Smithsonian Institution, whose accession lists show that various lots of natural-history material from Mauritius

were received in 1873, 1874 (including fishes and drawings of fishes), and in 1883. Beyond the mere notation that these drawings of Mauritius fishes are recorded as received from Pike, nothing further can be found. It is barely possible that Pike sent home by some government vessel all his volumes of drawings, together with the collections destined for the Smithsonian Institution, and that he later reclaimed these volumes of drawings. Other collections were presented to the Long Island Historical Society and placed in its museum, and a fine lot of starfishes and sea urchins were sold in 1873 to Ward's Natural History Establishment in Rochester, New York.

Still other specimens were sent to Louis Agassiz for the Museum of Comparative Zoölogy in Cambridge. These are noted in the reports of the Museum for 1871, 1872, 1873, and 1874. Of these, fishes are repeatedly referred to by Richard Bliss, Jr., in charge of ichthyology, as being numerous and in fine condition, and as giving an excellent view of the fish fauna of the western Indian Ocean. In the report for 1874, Bliss says "The work of identifying and cataloguing the large collection of Mauritian fishes is nearly completed. This collection now embraces upwards of two hundred and seventy-five specimens in alcohol, and many stuffed skins." The next year he reported that all the Mauritian fishes had been identified.

Now undoubtedly, Pike sent to Agassiz letters accompanying and describing these various shipments. Dr. Thomas Barbour, director of the Museum of Comparative Zoölogy, has made every effort to find these letters but there is no trace of them after all these years. This is of course greatly to be regretted.

The identification of these fishes was begun by Franz Steindachner, probably when they began to come in. When he returned to Europe about 1873 he left behind his manuscript descriptions of six new species—among them a new *Gymnothorax* which he named *pikiei* in honor of the collector. In finishing the identifications, Bliss found seventeen other new species, one of which (a *Pomacentrus*) he also named *pikiei* for Col. Pike. His and Steindachner's descriptions of these were published under Bliss's name as 'Descriptions of [23] New Species of Mauritian Fishes' in volume XIII of the Transactions of the Royal Society of Mauritius in 1883. In the library of the American Museum is to be found Bliss's holographic manuscript of this article. In this, just below the title, is the following note which is of particular interest just here:

In identifying the large and valuable collection of fishes from Mauritius, sent to the Museum [of Comparative Zoölogy] by Hon. Nicolas Pike during the years 1871, 1872, 1873, the following hitherto undescribed species were determined. In the work of identification I have been greatly aided by a full and very valuable series of colored drawings carefully made by Mr. Pike from living specimens and kindly loaned by him to the Museum for my assistance. Several of the species were determined by Dr. Steindachner in 1873, during his engagement at the Museum.

This manuscript is probably a duplicate of the copy sent to Port Louis for publication. It was probably returned to Pike along with his drawings when Bliss had finished identifying the Mauritius fishes sent to Cambridge. At any rate, it was offered for sale to the American Museum by Pike's son, J. Trevett Pike, on February 9, 1912, was later purchased and presented to the library of the Museum by Mr. J. P. Morgan, Sr., as is noted in the report of the Museum for 1912. Here the statement is added: "This work is of especial interest since it serves in part as letter press for the volumes of unpublished drawings which were received from the same donor in 1905."

How these drawings came to the American Museum was long a puzzle. The first clue came in a note found in the Museum Journal for October, 1904 (p. 87), where the statement is made that Col. Pike had deposited in the Museum six volumes of water-color sketches of more than four hundred Mauritius fishes. In the course of the negotiations leading up to the purchase and presentation of these volumes by Mr. Morgan, a mass of correspondence and of recommendatory letters was accumulated in the files of the library. These letters largely form the basis of what follows. However, before going further into this, it will be necessary (perforce briefly) to sketch what is known of Pike's life between the time of his return to America in 1874, and the sale of his drawings in 1905.

Of Pike's life after his return from Mauritius, I can find but little. The Brooklyn Directory has him living in that city from 1881 to 1891—after which he drops out. Beginning with 1895 and continuing to 1897, he is listed in the New York Directory as a broker at 43 Exchange Place, and living in New York City. After 1902 he is no longer in the directory, but from the letters previously cited, I find that in 1904 and presumably until his death in 1905, he lived at 271 West 113th Street. Dr. F. M. Chapman recalls that about this time he used to come frequently to the Museum, that he was a hale and hearty person, and that he always walked from his home to the Museum and back, a distance of about four miles.

This is borne out by the photograph of Pike reproduced as figure 2. This picture, which was evidently made in his later years, came to me from Dr. Thomas Barbour, Director of the Museum of Comparative Zoölogy, in Cambridge, Mass. Of this picture, he writes: "The por-

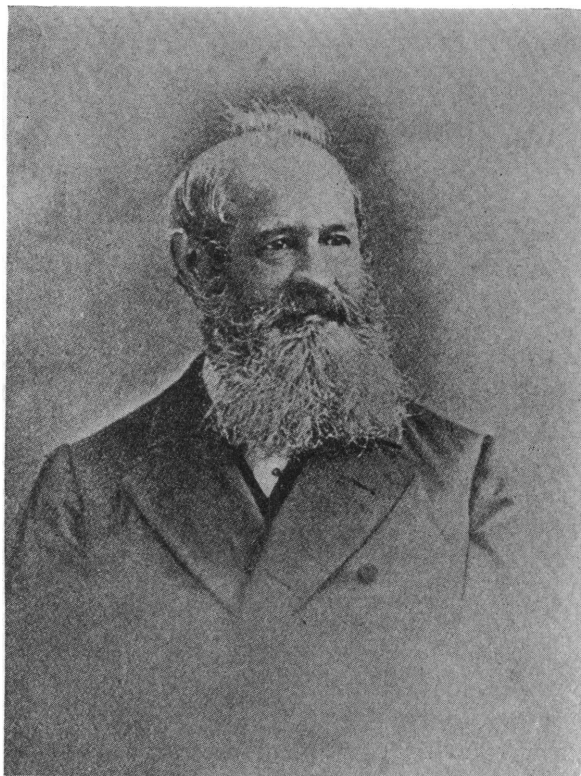


Fig. 2. Nicolas Pike, from a print in the files of the Museum of Comparative Zoölogy, Cambridge, Mass., source unknown. The original [photograph?] was probably made about 1890 when Col. Pike was about 72 years old.

trait we have is evidently just the frontispiece of a book torn out. We found it in a filing cabinet here in my office with no data in the folder with it." If its origin could be ascertained, we would probably be in the way of learning something of Pike's later years and possibly of that missing "second volume." This picture shows Pike to be well up in years but plainly a strong man still. One other picture has been found—

in a "write up" of Pike in the *Brooklyn Daily Eagle* of Sunday, March 31, 1895. This was probably made in the late 80's or early 90's, since it portrays a man plainly younger than does figure 2.

In his latter years Pike fell on hard times and efforts were made both by him and by his son, J. Trevett Pike, to sell the drawings of the fishes of Mauritius. In the files of our library is a sheet noting that on July 26, 1904, Col. Pike deposited in the Museum seven volumes of these water-color drawings (not six as noted above from the Museum Journal). In our files are also letters and copies of letters relative to the sale of these drawings. Among them is one from Col. Pike to Mr. J. P. Morgan, Sr., dated July 18, 1904, in which he speaks of his work in Mauritius and of the collections he had made there and had sent to various institutions in America. Then of the matter in hand he says:

The fish of the Indian Ocean are of very brilliant colors which fade completely out after death, so on taking them into the boat, I had the sketches made and the colors noted, and the result is a collection of about five hundred beautiful fish painted in water colors, life size, and bound in seven volumes—all named and indexed. They are a unique and valuable collection, as such a work has never been attempted before. Mr. Bumpus, the Director of the American Museum of Natural History, New York City, has seen and admired them and wants them for the Museum. He desires me to send them to his museum to let the Directors [trustees?] see them, with the object to obtain a donor for the collection. Do you think that you feel inclined to interest yourself in the matter?

Again on August 22, Col. Pike wrote in answer to a letter from Mr. Morgan, dated August 4, and said of the "colored paintings of the fish of the Indian Ocean" that:

They are unique as no other collection exists. I will sell them for \$1200 and wouldn't take that but I need the funds. They could not be duplicated for five times that amount, as many are very deep water fish and difficult to get.

Professor Gunther of the British Museum some years ago wished to have them, but I want them to remain in this country. . . . I have sent the volumes to the American Museum of Natural History and the Librarian there will show them. I have not offered them to any one else but you.

Efforts were later made elsewhere to sell these drawings. The late Dr. F. A. Lucas stated that, while he was director of the Brooklyn Museum, they were offered to him, about 1904. An effort was also made to interest the U. S. Bureau of Fisheries and the National Museum. This had the backing of Dr. David Starr Jordan who wrote to J. T. Pike under date of December 7, 1904, that: "If the pictures in the Pike collection are of sufficient accuracy I should hope that the United States Fish Commission might be able to purchase them, in which case I should be glad to publish them, preparing the text for them." How-

ever, nothing came of these moves, and early in 1905 they were purchased by Mr. Morgan and presented to the Museum.

In the Report of the Museum for that year is the entry under accessions in the library of "a gift from Mr. J. Pierpont Morgan of seven volumes of plates of the fishes from the island of Mauritius." However, Pike's name occurs neither on the covers of these volumes nor on a single one of these drawings. At that time it was of course known that they were Nicolas Pike's work, and the accession book and the card catalogue record them under his name. Furthermore, there are to me, working over these drawings twenty-four years later, a thousand internal proofs that they are indeed Pike's work.

There are not seven but eight volumes of drawings bearing our library's accession numbers 7751-7758 consecutively. The first of these is without serial number for this collection, is quarto in size, and bears an old handwritten label, 'Sketches of Fishes.' It was not known to our librarians as the work of Nicolas Pike, but is catalogued under Anonymous, although accessioned along with his known works. Certainly it is not included in a list of the seven volumes temporarily deposited by Nicolas Pike in our library on July 26, 1904. However, we have a letter from Mr. Morgan's secretary, dated February 7, 1905 (within a month after his purchase of the seven volumes), concerning certain "papers connected therewith." He states that "Mr. Morgan considered that as he had purchased the collection, that such papers belonged to him." Hence the librarian of the Museum is instructed to hold them. These "papers" I take to be the volume referred to above.

The next volume, an oblong folio, is also without serial designation, but is labelled 'Rough Sketches of Large Fish' in the same handwriting as the preceding volume. It is the first catalogued under Pike's name. This and the other volume above are roughly bound in paper-covered boards with leather backs. The hand-written labels in ink on the inside of the front cover of each are in the same handwriting—presumably Pike's.

Of the remaining six volumes, five are substantially bound in cloth-covered heavy boards with leather backs and corners. Each has on the outside of the front cover a lozenge-shaped leather label with tooled edges which bears the words 'Mauritius Fish, Vol. 1,' and so on to "Vol. 5." These are all definitely credited to Pike. Vol. 1 is an oblong folio, Vols. 2 and 3 are quartos, Vols. 4 and 5 are also oblong folios. Vol. 6, an elephant folio, bound in cloth-covered boards,

is without the hand-written designation in ink in an unknown hand such as the first and second unnumbered volumes have, and is without the leather label which is found on Vols. 1 to 5. Our cataloguer has written on the inside of the front cover in pencil the designation 'Pike's Fishes of Mauritius. Anatomical Plates.'

Such then are the bare facts about Pike's manuscript drawings of fishes from Mauritius. Brief analysis of these volumes will now be entered into to make known their contents, and to give Nicolas Pike the credit due him for good work done sixty years ago on an isolated islet in the western Indian Ocean.

The first unnumbered volume, entitled in ink on the inside of the front cover 'Sketches of Fishes,' possibly in Pike's handwriting, is a quarto about 12.5 inches high by 7.75 inches wide. This is made up of rough sketches on sheets or scraps of paper. Some papers are single sheets, others are made of several fragments pasted together. This is called a sheet herein. Sometimes a sheet is only the back of an envelope. Sometimes a sheet is folio in size to accommodate the drawings of a large fish, and in order to get it within the covers it has been folded two or three times. In this volume I make out about one hundred and fifty sheets, counting as a sheet everything pasted on a single stub whether one, two or three fragments.

The majority of these sheets have each a sketch of a whole fish or the head or other part of a fish; some few, however, have notes only. Most of the sketches are in pencil, but many are in colored writing inks or water-colors. Sometimes the figure is colored throughout, sometimes splotted with colors to show the location of colored areas, and sometimes these colored areas are merely blocked off and marked "red," "black," "green," etc. Sometimes a sheet will have figures on both sides. On a sheet having a sketch of the whole fish, one often finds inset figures of the head (frequently looking straight at one), of snout, jaws, and teeth (in palatal or lateral view), or of fins and tail. Some sheets have two views of the same fish, or two fishes on the same side, or one front and one back side. Some sketches are dated. Some are very good, having the relative measurements noted, while others are merely simple outlines. However, some sketches have fair diagnoses of the fishes written on them, covering proportions, fin-ray counts, scale counts, colors, etc.

This is apparently an old consular account book with most of the pages cut out and with the large sheets or small fragments pasted on to the stubs of these, or on to the original (uncut) sheets. The whole volume

is composed of rough sketches made in the field probably from live or, at any rate, from recently caught fishes, and evidently intended as guides for the making of the better sketches to be considered presently. For instance, one such rough sketch is marked "Vol. 4, p. 46" and reference to this volume and page shows a large, detailed colored drawing of the fish in question. Both sketch and colored drawing are marked "*Belone* sp.," and "107 Ag.," the latter evidently being fish No. 107 sent Agassiz at Cambridge. Another sketch is marked "292 Ag. Stuffed"—evidently one of the stuffed specimens to which Bliss referred as noted above; and another is marked "Bourse [native name] done. Vol. 4, p. 54-o," and in volume 4, p. 54-o the completed drawing is found. Others of these rough sketches are marked "not done."

The next unnumbered volume is an oblong folio nineteen inches long by twelve inches deep. This volume originally consisted of bound-in sheets of two kinds: first, of fairly heavy paper suitable for drawings, and secondly, of thinner and slightly smaller sheets apparently intended as guards for the others with their figures. In addition, there have been pasted in various sheets of paper of various kinds and sizes (as in the first volume) having drawings or notes or both on them. I count fifty-three such sheets.

The sketches in the first part of this volume are mainly of sharks and rays, and of teleosts of large size. Some of the sketches are so large as to require two or three sheets, pasted or pinned or sewed together. Most of the sketches of fishes are in pencil, some are in colored inks, and some are in water-colors. Very often the relatively small sketches are pasted on the sheets, sometimes these are found on both sides of a sheet. Many of the sketches are dated. Some of them are marked as those in the other volume—"No. 292 Ag.," "Vol. 1," etc.

Notes in Pike's handwriting are found on the sheets bound in with the drawings, others are pasted or pinned on. These notes give details of measurements, proportions, colors, etc. Sometimes these are noted on the sketches of the fish itself. When separate from the sketches, if on large paper, the notes are in ink, if on scraps, generally in pencil. Some of these notes are almost identical with various paragraphs or sections of his book 'Subtropical Rambles.'

This volume, like the preceding, evidently consists of sketches and notes made in the field, or of trial sketches, possibly made in his workroom, all to be later worked up in permanent form. The sketches of sharks and large teleosts were probably made at the fish market, or the "bazar" as Pike calls it—indeed some are so noted. Those

of most of the sharks and rays, and of at least some of the large teleosts, were reproduced in the form of finished drawings in the elephant folio (Vol. 6) presently to be described.

We now come to the numbered and permanently bound volumes of finished drawings in colors. The first of these, having on the outside the leather label and on the inside a paper label (presumably in Pike's handwriting) reading 'Mauritius Fish, Vol. 1,' is an oblong folio containing fifty numbered sheets eighteen inches long by twelve

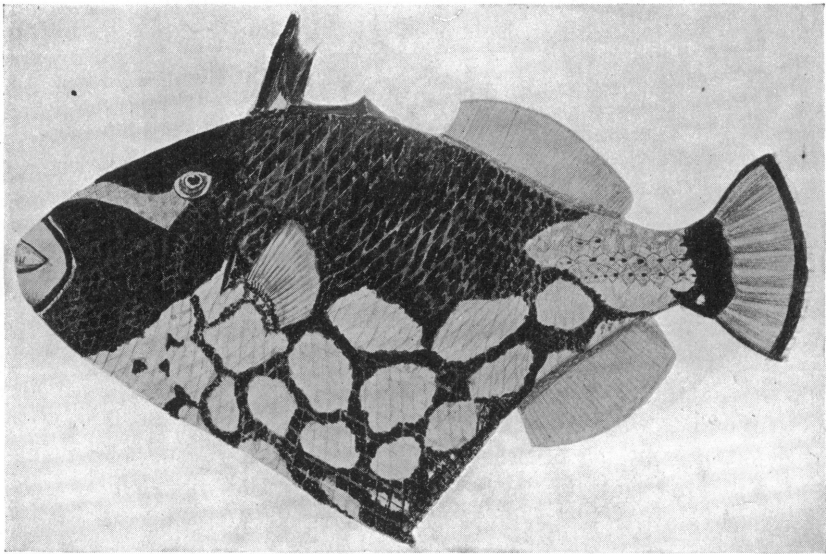


Fig. 3. A filefish, *Balistes conspicillum*, Bl. Schn. From 'Mauritius Fish, Vol. 1,' p. 38.

high. In front of each is a sheet of tissue paper to serve as a protection for the drawings, and in front of each tissue sheet are two sheets of writing paper for notes and descriptions. At the front of the volume is a handwritten index sheet (folio size) arranged in columns as follows: page or plate number, number of the drawing (there are sometimes more than one drawing to a sheet as noted below), scientific name, number of the fish as sent to Agassiz (eighteen of the sixty-six sketches are so marked), and lastly the "Creole name" (twenty-two such are given). At first I thought that the index was made by Pike, but closer study shows that only part of it is his, many of the scientific names

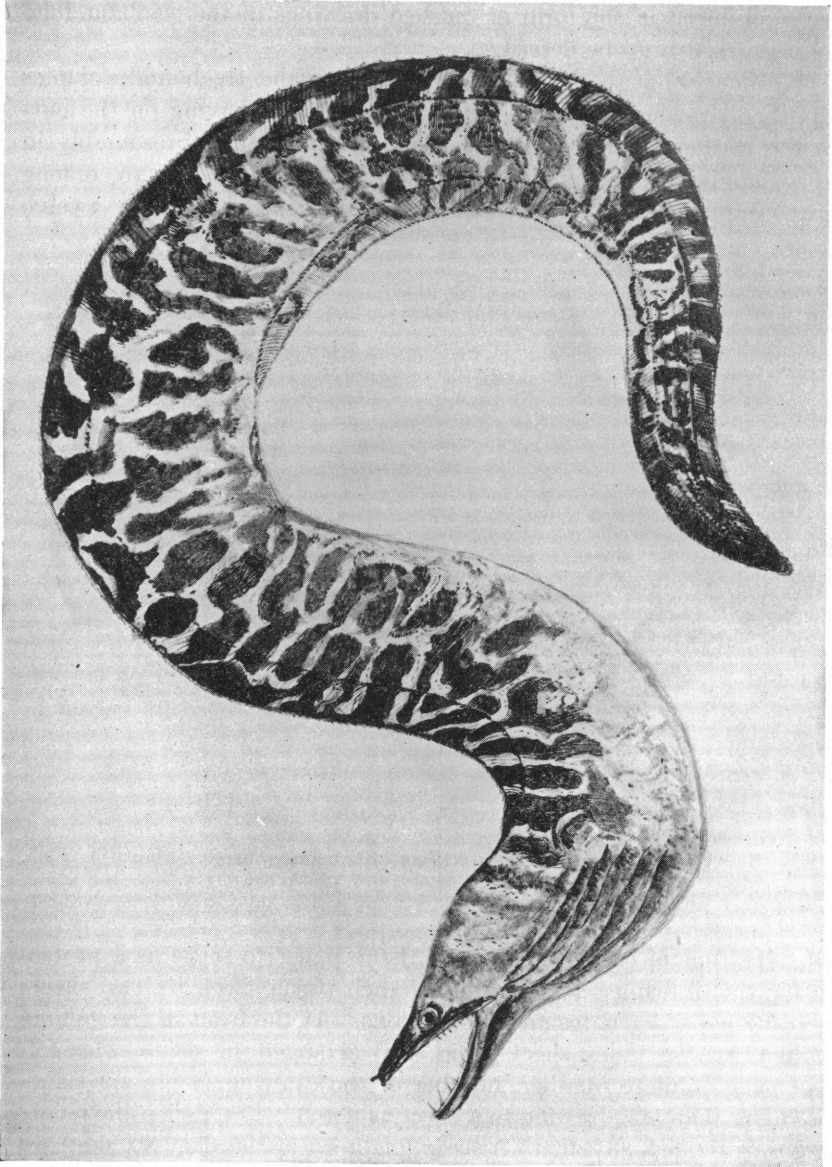


Fig. 4. A moray eel, *Pæcilophis fascigue*, Peters. From 'Mauritius Fish, Vol. 3,' p. 43.
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being put in by Bliss. By comparing this writing with that in Bliss's manuscript one finds certain letters; i.e., a peculiar and characteristic letter "t" in both that enables one to pick out some at least of Bliss's names. In other words, Pike put in the scientific names of all the fishes he could identify, and Bliss completed the list.

There are in this volume a total of sixty-eight drawings. Sometimes the sketches are on boards which have been pasted on the bound-in sheets. On some of the sheets are inset drawings in pencil or colors of particular parts, especially head and mouth, while one has an entire fish drawn in pencil. Fig. 3 is from a photograph of a sample drawing in this volume. Of course, it cannot give an idea of the colors, but it does give shape and form, fin-rays, etc., and from it and others to be reproduced from the other volumes one may get a fair idea of Pike's work.

'Mauritius Fish. Vol. 2' is an oblong quarto twelve inches long by nine inches high. It contains sixty-eight heavy drawing boards having on them a total of eighty-eight drawings. In front is an index ruled in columns for the same data as noted in Vol. I. The writing seems to be that of both Pike and Bliss, but the majority of the scientific names are Bliss's. Many sheets have as insets enlarged drawings in pencil or colors giving details of head, jaws, teeth, scales, etc. Indeed in the count above are six colored drawings and six pencil sketches on writing paper. Some of these colored sketches on plain paper are presumably intended to show changes in color, or of proportions with age. Fig. 4 is a fair sample of the fishes portrayed in this volume.

'Mauritius Fish. Vol. 3' is entirely similar to Vol. 2 in format. It has sixty plates with a total of eighty-nine drawings including three colored and three pencil sketches on letter-paper pasted in. On the plates (in this and the other volumes also) are found generally in the lower left corners the creole names of the fish in Pike's writing. On the lower right corners are the scientific names, sometimes in Pike's writing but much more often in Bliss's. Some of these plates are marked thus: "Sent home '69." Many bear numbers as "No. 237 Ag." Many of the plates bear dates. One or two were painted by Pike's friends and are so labelled in his writing, as "Painted by Mrs. Col. Lowe." Many are marked "Drawn from life." Pike seems to have been troubled by changes in color, as is instanced by the words "Color of fish just dying." Descriptive of the fishes are thirty-four lots of notes in Pike's hand, varying from a mere line giving the

fin-ray count to a full description of the fish. Fig. 5 is a representative drawing from this volume.

'Mauritius Fish. Vol. 4' is an oblong folio of the same format as Vol. 1. It contains seventy-one sheets having a total of one hundred and thirty-six figures, the largest number in any volume. On several

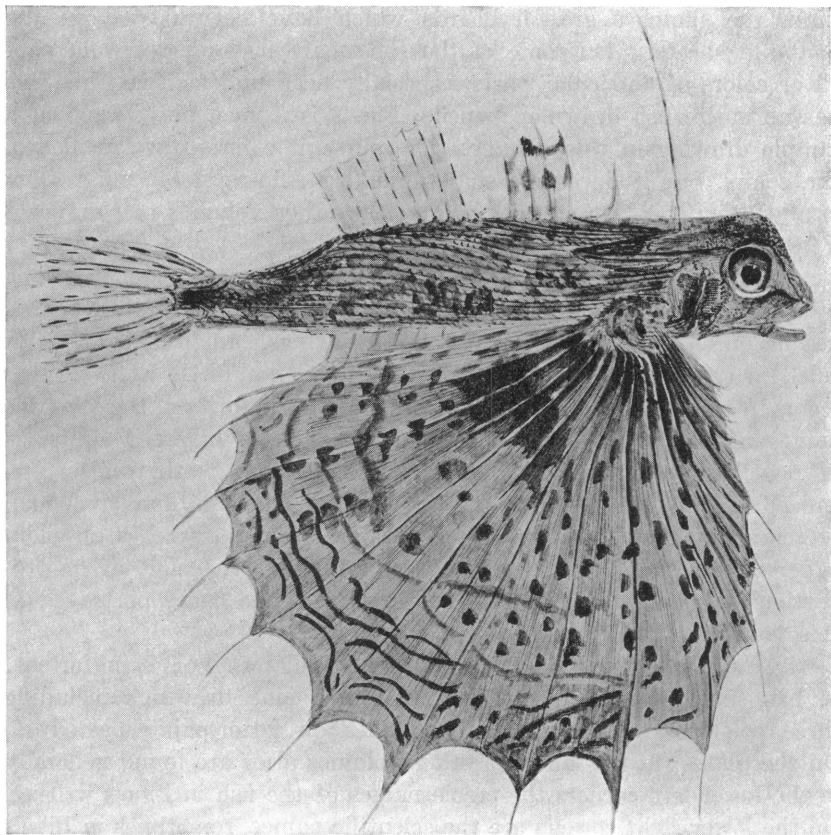


Fig. 5. A flying gurnard, *Dactylopterus orientalis* C. V. From 'Mauritius Fish, Vol. 3,' p. 53.

sheets are found a dorsal or ventral or lateral view of the same fish, and colored or pencil insets showing various details. Fig. 6 portrays a fish from this group of paintings.

There are more manuscript notes (sixty-one lots for the seventy-one plates) in this volume than any of the preceding ones, and they are

much fuller than any of the preceding notes. The longer notes go carefully into many details, particularly in the matter of color and color changes while living or after death. Many of the drawings are dated, and many have notes in Pike's writing stating where the fish was caught.

This volume has a canvas cover to protect the binding. In this, as in a pocket, is an eight-page foolscap manuscript on the Gourami written in a "copper plate" hand not Pike's, but having a marginal note by him stating the source of this "information." This canvas cover was presumably put on in Port Louis; at any rate, it is padded with copies of a Port Louis newspaper.

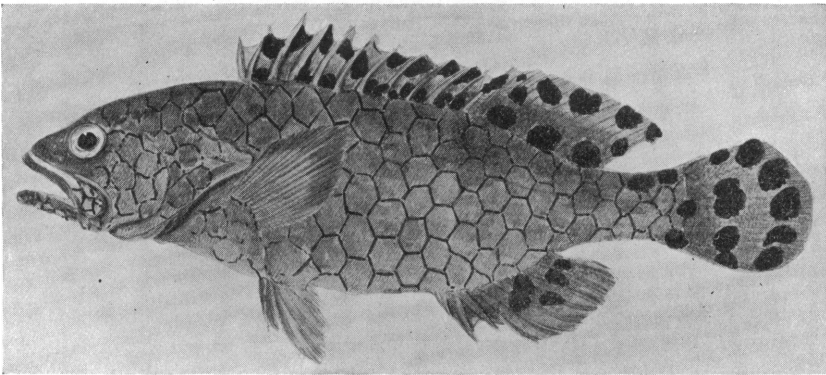


Fig. 6. A sea-bass, *Serranus macrospilos* Blkr. From 'Mauritius Fish, Vol. 3,' p. 30.

'Mauritius Fish. Vol. 5' is an oblong folio of the same shape, size, and material as are Vols. 1 and 4. It is an incomplete volume having fewer than half of its sheets utilized. It was begun on Dec. 12, 1871, and the last dated drawing in it bears the notation, "Oct. 2/73." On its thirty-seven used sheets are found seventy-nine drawings, mostly in colors, but some in ink or sepia washes. Some of these figures are marked "sketched from life" but of fifteen it is stated that each was "drawn from a specimen [dried or in spirits] in the Museum [at Port Louis]." Not all of these figures are in colors. They vary in completeness from mere pencil sketches (about five in number) all the way up to completely colored figures. Many are done in a wash apparently made by diluting writing ink. These, however, are mainly the museum specimens. There are found occasional inset drawings

giving details, and frequently a dorsal or ventral view. Manuscript notes are found for twenty-three of the sheets. There are none for the museum specimens, but those given for the other drawings are, generally speaking, fuller than those in the other four volumes. Figure 7 illustrates very well the work done on these paintings.

'Pike's Fishes of Mauritius. Anatomical Plates' is the inscription in pencil on the inside of the fly-sheet of volume 6. I do not think that

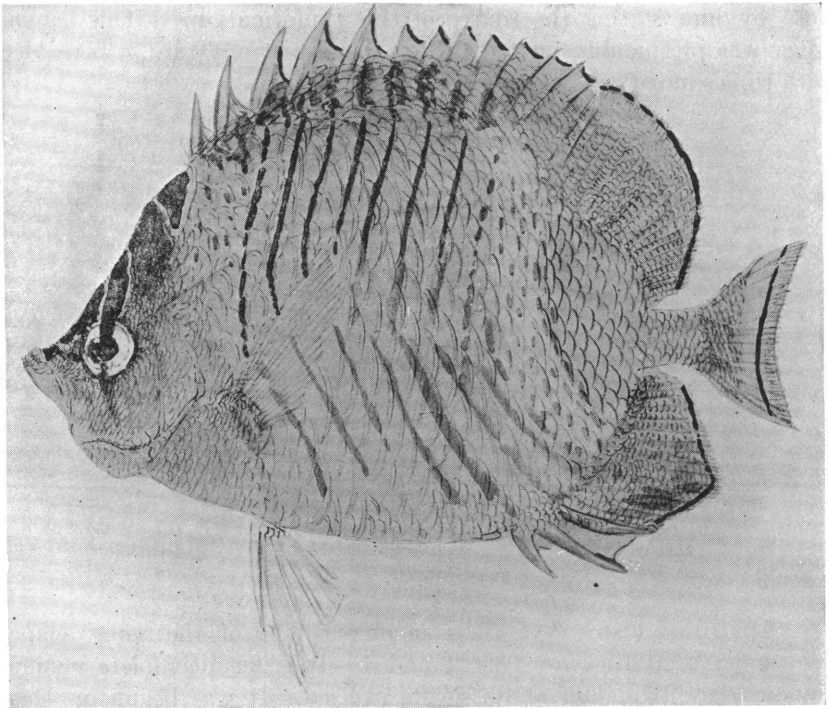


Fig. 7. A butterfly fish, *Chætodon xanthurus* Blkr. From 'Mauritius Fish, Vol. 5,' Pl. xxxi.

this is Pike's writing; possibly it is the cataloguer's. At any rate, there is nothing anatomical about them, and the subtitle should read 'Plates of Large Fishes.' This is an elephant folio with sheets 27.75 inches high by 19 inches wide, with the fishes drawn on the length of the sheets.

There are twenty-six drawings of Mauritius fishes by Pike, divided up as follows: elasmobranchs, 19 (sharks 13, rays and ray-

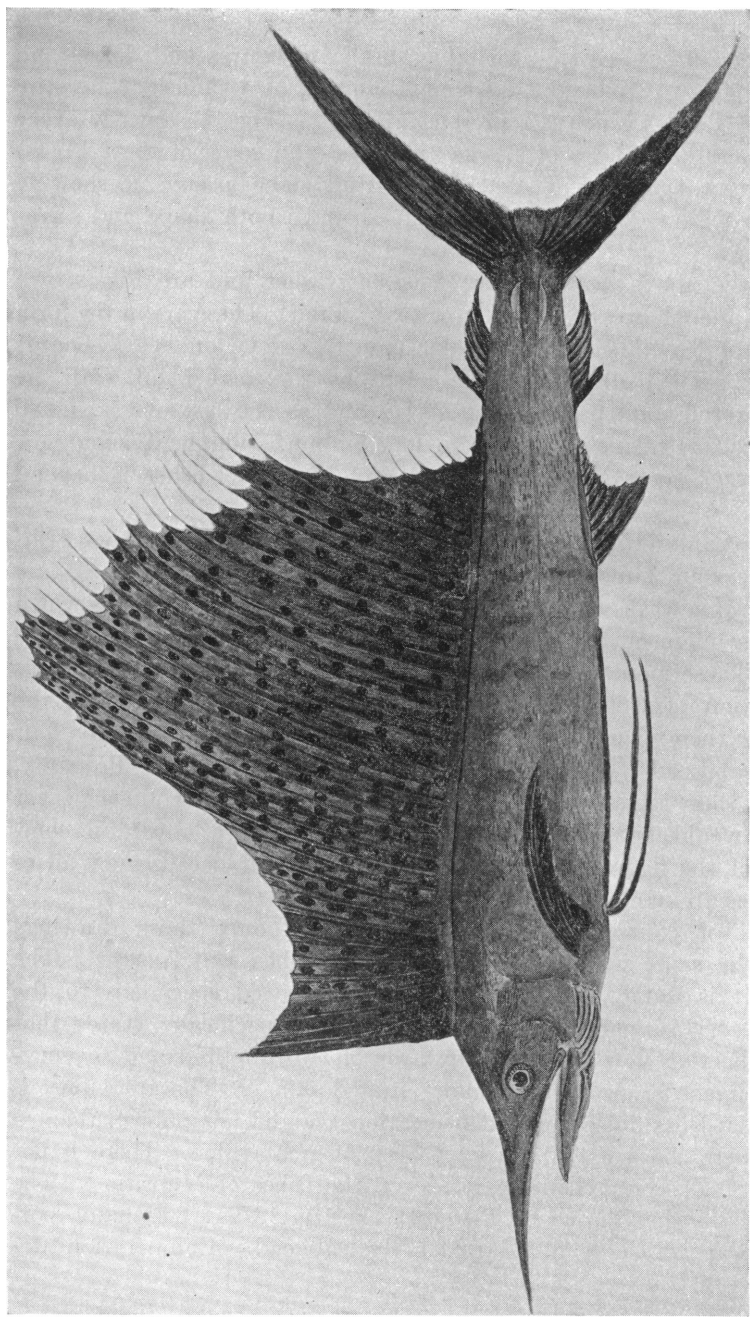


Fig. 8. A sailfish, *Histiophorus gladius* Lacép. In the lower left corner of the original is a spine-like scale which is pasted on to the plate in the volume. From 'Mauritius Fish, Vol. 6,' Pl. xxiv.

like sharks 6); teleosts, 7 (including duplicate figures and dorsal and ventral views). On page 24 is a fine painting of a sailfish (a favorite subject of Pike's) which is reproduced herein as Fig. 8. Nearly every one of the above plates of sharks and rays (and some of the teleosts) has an inset figure, or a sketch on writing paper pasted in, showing jaws and teeth. Most of the shark teeth have both shape and serrations shown.

All the above drawings are done in washes and are Pike's own work. Not so, however, the six now to be noted. These are in the form of more or less fanciful water-color paintings done on heavy boards pasted in. These drawings are all done by the same hand, with the same materials and in the same style; and as the last one is signed "E. Burrell," I take it that all were done by him. Who he was and how his drawings got among Pike's figures of Mauritius fishes is beyond my ken.

To recapitulate: in the six volumes of Pike's 'Mauritius Fish' there are four hundred and eighty-six drawings. All of these are colored (some wash) drawings save about a dozen pencil sketches which vary from mere outlines to the completed sketch ready for the water-colors. These mere numbers indicate a prodigious industry, and one's appreciation of this becomes all the greater when one studies the paintings themselves. It must not be understood that exactly four hundred and eighty-six species of fishes are figured by Pike. Probably, however, there are at least four hundred species. To ascertain the exact number would be very difficult. It would involve a careful comparison of the figures, and would be more difficult because not all of the figures are named by either Pike or Bliss.

Bliss of course could positively identify only those drawings having the same numbers as those on the fishes sent Agassiz. The statement is found that Pike sent eight hundred specimens to the Museum of Comparative Zoölogy, but Bliss specifically states that "this collection now embraces upwards of two hundred and seventy-five specimens in alcohol and many stuffed skins." The great pity is that, when Bliss finished his identifications, he did not publish them—even a mere check list would have been of great value. There is not today a single comprehensive article on the fishes of Mauritius. The best yet published is one by Pieter Bleeker¹ in 1879. The major portion of this article is found under the subhead—'Enumération des

¹Pieter Bleeker. 'Contribution à la Faune Ichthyologique de l'Ile Maurice.' *Verhandelingen K Akademie Wetenschappen*. Amsterdam, 1879, XVIII, 23 pp., 3 pls.

Especies de Poissons Actuellement Connues de l'Ile Maurice.' This, which covers sixteen pages, is merely a list of the names of four hundred and seventy-one species of fishes. Bleeker does not name a single authority for the inclusion of a single fish in his list, and beyond its bearing Bleeker's name one is entirely in the dark as to its authenticity.

A final comprehensive review of these paintings reveals scattered notes by Pike, which may be gathered in a final paragraph. He frequently notes the sex of the fish; that it was a young or an old specimen; that it was painted from life, just after death, or from a museum specimen dried or in spirits; sometimes two specimens are drawn; many are marked "poisonous," "not allowed in bazar"; in some, length and proportions are given and the scale of the drawing indicated; sometimes parasites are drawn attached to the fish; and often the locality or depth of water from which the specimen came is indicated. He sometimes has two drawings of the same fish in different colors, plainly not recognizing these as color phases. Nor did Bliss, since he generally marks the second fish "var." (i.e., variety). Occasionally scales, especially from the lateral line, are pasted on the drawings, or there are separate drawings of these. All these fishes are from Mauritius, save nine specifically noted as having been sent from the Seychelles Islands by Swinburne Ward, administrator of those islands.

Of the accuracy with which Pike did his work, I can only speak in generalities, since I have not seen the fishes. The only man who can give valid testimony is Bliss. He has already been quoted as to the value of Pike's drawings in his work of identifying the alcoholic specimens. However, in the correspondence previously referred to there is a letter dated January 12, 1905, from Bliss to J. Trevett Pike, in which he speaks of these paintings in the following terms:

I remember the collection of water-color drawings you speak of very well and remember that at the time they seemed to me remarkably good drawings, and accurate representations (so far as I could judge from the alcoholic specimens) of their color. Certainly they were accurate so far as the pattern of coloration went. I also recollect that this opinion as to the remarkable excellence of the drawings was shared by Professor L. Agassiz. There was no report of the collection published, I believe, though the work was described in the annual reports of the Museum. I have no doubt as to their accuracy of detail for scientific work.

This is high praise, but I judge by no means exaggerated. The fin-ray counts, the general proportions of the body, and the colors must have been accurate or else Bliss would have been at a loss in checking a fish against the first or the best description of it. There is

no record that Pike was a trained ichthyologist nor that he had been taught to draw, but he certainly produced excellent results. However, all the scattered data relating to Pike's life before he went to Mauritius show him to have been intensely interested in all natural-history matters. He was, for his day, an expert photographer, and it may be that in his work as a manufacturer of paper hangings he made his own designs and thus gained the proficiency in drawing and coloring which his fish paintings plainly show.

As one works through these six volumes of water-color sketches, one finds occasion to criticise Pike's drawings of outlines, but there is every reason to believe that his coloring and such details as fin-ray count are correct. Two critics, a painter of marine fishes, and a student of the fishes of the western Pacific and of the East Indies, after looking these drawings over have pronounced them very good. Pike was not a professional animal artist but he certainly must be given high standing as an amateur.

The care which Pike took to secure accuracy in details is shown in the fact that his pencil sketches in the two unnumbered volumes first considered, and the occasional pencil sketches in volumes 1 to 5 generally have notes written on the sketch or on the attached sheets giving data as to proportions, color, etc., which would be needed for the completed colored drawing. Then in the volumes 1 to 6 of completed drawings, before each painting are blank sheets of writing-paper (one to three in number) bound in for notes of all kinds. In Pike's six volumes there are four hundred and eighty-six drawings and one hundred and seventy-one lots of these notes. However, since there are frequently more fishes than one drawn on a sheet, I find that these notes and descriptions apply to two hundred and eighty-three fishes. These notes vary in length from a line, giving merely the fin-ray count, or when and where the fish was taken, to two or three pages giving a pretty full description of the fish with various natural-history data (food, habitat, habits, etc.).

Bliss, in 1874, says (see *ante*) that the Museum of Comparative Zoölogy had received from Pike about three hundred specimens. These he identified with the help of the drawings under consideration. As has been noted, Pike, if he had sent a fish to Agassiz, presumably numbered the drawing of it thus (say) "Ag. 29." If, then, the fishes bore like numbers, this undoubtedly lightened Bliss's labors. Not all the drawings, however, were so labelled, for occasionally I find one labelled in the same fashion ("Ag. 63") but in pencil and as best

I can judge in Bliss's writing. Of the fishes labelled "Ag.," I count two hundred and sixty-seven, but that this is not the full number is certain.

Nearly all these figures have been identified and have their scientific names written below. Of these about one hundred and thirty seem to be in Bliss's writing with a number of others doubtfully assigned to him. Pike seems to have named about seventy-three, also with a considerable number doubtfully assigned to him. There are about twenty which had been named by Pike with corrections by Bliss in either the generic or the specific name. Also, others were presumably done by Steindachner. This is as far as I can go in this matter without making a more intensive study of the handwriting of the two men than the case seems to merit.

It may be repeated, for the sake of emphasis that, so far as is known, Nicolas Pike had systematic training in neither ichthyology nor drawing. We are even in ignorance as to his working tools, though on this point I infer that he had a set of Cuvier and Valenciennes' 'Histoire Naturelle des Poissons,' and he may have had Gunther's epoch-making, eight-volume 'Catalogue of the Fishes of the British Museum,' which appeared 1859-1870. Furthermore, he was living on a small isolated island in the western Indian Ocean, an islet only twenty-three miles broad by thirty-six long, one hundred and thirty miles in circumference, and having a total area of only seven hundred and ten square miles—a mere dot in a vast ocean. True, Port Louis in his day had a population of about 60,000, but most of the people were from India, Madagascar, Africa, Arabia, etc. The white inhabitants were in a very small minority, the educated persons in still smaller number. There was a scientific society and a museum, but neither had any funds, the membership was small, the interest smaller. Life was very primitive. The climate was hot and oppressive, the temperature at Port Louis, ranging from 90 to 96 degrees F. from December to April, and averaging for the year 78.6 degrees F. Yet Pike writes of the island that "Its coasts afford the naturalist never-ending stores for collection and study, and all these go far to make up for the many things so totally deficient in Mauritius; in fact, they make life bearable, which would be without them a dull monotone."

Into these uncongenial, enervating, and by no means intellectually stimulating surroundings, came a man fifty years old, lacking systematic training in natural history, and with light official duties. Instead of giving himself over to ease, boredom, and dissipation as

many tropic dwellers do under like circumstances, he lived an active, even a laborious life. He made large collections of natural-history objects, with which he enriched at least three museums; he made four hundred and eighty-six drawings (mainly colored) of the Mauritian fishes, and appended to two hundred and eighty-three of these descriptions and data, more or less adequate; he wrote a capital book of travel and natural history observations; and, lastly, he prepared an extensive treatise on the fauna and flora of Mauritius, which has unfortunately disappeared.

I may here, in passing, interpolate a statement of my belief that Pike made many other natural-history drawings of which we have no record. I believe that he drew practically everything that he collected. This has in part at least received confirmation in a letter from Dr. Barbour of the Museum of Comparative Zoölogy, who says: "I have seen here a great number of colored drawings by Pike of insects and marine invertebrates—of which he sent large numbers to Agassiz." It may also be noted that in several of the above volumes there are a few drawings of marine invertebrates.

To rescue from oblivion the name of this man, to make known his work and particularly his drawings of fishes, and by means of the index which follows to make these drawings accessible to systematic ichthyologists as a check list of the fishes of Mauritius—these are the purposes of this article.

INDEX TO NICOLAS PIKE'S COLORED DRAWINGS OF MAURITIUS FISHES

The following alphabetical tabulation of Pike's figures of Mauritius fishes has been made to facilitate the use of these figures by students of systematic ichthyology. The names given are those assigned by Pike or by Bliss, or they are Pike's corrected by Bliss. The new species are marked with an asterisk (*). However, there are several marked "sp. nov." on the drawings but not included in Bliss's manuscript list which has been previously referred to; these have not been starred. The number of the drawings in this list is four hundred and eighty-six. Everything has been counted—whole pencil sketches (but not such as heads, etc., for detail), and all dorsal and ventral sketches when complete. All the data recorded in this table have been taken from the drawings themselves or from the indexes to the various volumes, save matter in brackets, such is mine, interpolated for the purpose of explanation.

ELASMOBRANCHII—SHARKS AND RAYS

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
1	<i>Acanthias vulgaris</i> Risso	requin à 3 piquants	298	VI;4	adult female
2	<i>Carcharias</i>	l'endormi		VI;2	length 13 ft. 7 in.
3	<i>Carcharias (Prionodon)</i>			VI;17	[duplicate figure]
4	<i>Carcharias (Prionodon)</i>			VI;18	about 5 ft. 11 in.
5	<i>Carcharias menisorrhæ</i> M. & H.	l'endormi	256	VI;4	dried specimen
6	<i>Carcharias walbechmii</i> Blkr.	jeune requin		IV;1	[dorsal view]
7	<i>Carcharias walbechmii</i> M. & H.			VI;15	[ventral view]
8	<i>Ceratoptera ehrenbergii</i> M. & H.			VI;15	
9	<i>Galeus canis</i> Rond.			VI;1	
10	<i>Ginglymostoma concolor</i> Rüpp.	l'endormi		IV;1-o	
11	<i>Ginglymostoma concolor</i>	l'endormi		VI;1	
12	<i>Lamna</i> or <i>Carcharodon</i> sp.	le chasseur		VI;1	
13	<i>Laxodon macrorhinus</i> M. & H.	le chasseur	236	IV;1-o	
14	<i>Mustelus vulgaris</i> M. & H.	requin pavé	311	VI;3	[head and teeth separately]
15	<i>Myliobatus maculata</i> Gray	chauve souris	35	IV;26	young [head, pencil]
16	<i>Notidanus indicus</i> Cuv.	requin malais		VI;3	[head and teeth in pencil]
17	<i>Pristis zysross</i> Blkr.	la scie		VI;6	under side head, [pencil]
18	<i>Raja gesneri</i> Cuv.	violon		VI;10	stuffed specimen
19	<i>Rhynchobatis djeddensis</i> Forsk.			VI;7	[mouthparts in pencil]
20	<i>Stegostoma tigrinum</i> Forst.	requin tigré		VI;5	stuffed specimen
21	<i>Stegostoma tigrinum</i> Forst.	trembleur		VI;11	stuffed specimen
22	<i>Torpedo panthera</i> Rüpp.		53;19	I;40	
23	<i>Torpedo fuscomaculata</i> Ptrs.			I;40-x	
24	<i>Terniura melanospiila</i> Blkr.	la raie noir		VI;9	[mouthparts in pencil]
25	<i>Tryg n uarnak</i> Rüpp.	rae blanc		V;24	dried specimen
26	<i>Zygæna mokarran</i> Rüpp.			VI;2	young

TELEOSTEI—BONY FISHES

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
27	<i>Acanthurus ctenodon</i> C.V.		15	IV;23	
28	* <i>Acanthurus fasciatus</i> Bliss	ripé		IV;23	sp. nov.
29	<i>Acanthurus gemmatus</i> C.V.		180	II;25	very rare
30	<i>Acanthurus gemmatus</i> C.V.	ripé		II;28	
31	<i>Acanthurus guttatus</i> Forst.	chirurgien	199	I;46	[also specimen from Seychelles]
32	<i>Acanthurus hepatus</i> L.	corne roi	40	II;29	
33	<i>Acanthurus leucosternon</i> Benn.	•	326	II;26	
34	<i>Acanthurus lineatus</i> L.		119	IV;49	very rare
35	<i>Acanthurus matoides</i> C.V.		27	II;30	
36	<i>Acanthurus matoides</i> C.V.	chiruf'gien jaune		V;15	old specimen
37	<i>Acanthurus nigros</i> C.V.	chiruf'gien		II;23	
38	<i>Acanthurus olivaceus</i> Bl. Schn.	chiruf'gien roi	34	I;44	
39	<i>Acanthurus rhombus</i> Kittl.	tabac à velours	315	II;24	
40	<i>Acanthurus rubropunctatus</i> Rüpp.		16	IV;23	
41	<i>Acanthurus rupellii</i> Benn. var.	tabac		V;18	
42	<i>Acanthurus triostegus</i> L.	conceus; ripé	45	I;45	
43	<i>Agonostoma tefalarii</i> Benn.	chilte	13	III;4	thick lipped specimen [in pencil]
44	<i>Ambassis</i> sp.	girandot		V;19	
45	<i>Ambassis dussumierii</i> C.V.			II;64	
46	<i>Amphiprion chrysogaster</i> C.V.		138	III;50	[2 insert sketches of head]
47	<i>Amphisile scutata</i> L.			V;18	dried specimen
48	<i>Anampses</i>	cateau de feu		I;23	adult female
49	<i>Anampses ceruleo-punctatus</i> Rüpp.	cateau		II;13	
50	<i>Anampses ceruleo-punctatus</i> Rüpp.	cateau	44	II;56	
51	<i>Anampses diadematus</i> Rüpp. var.	cateau de feu	38	IV;22	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
52	<i>Anampses diadematus</i> Rüpp.		226	V;3	
53	<i>Anampses meleagris</i> C.V.	cateau vert gras	299	V;9	
54	<i>Anampses turisti</i> Blkr.	cateau patna; mozambique		II;55	var. or sp. n.
55	<i>Anampses turisti</i> Blkr.	dame thombe		II;63	female, var.
56	<i>Anguilla labiata</i>	anguille grise	76	I;33	from a stuffed specimen
57	<i>Anguilla mauritiana</i> (?)	anguille de l'eau douce		I;34	from life
58	<i>Anguilla virescens</i> Ptrs.		276	I;33	[head only] from life
59	<i>Anguilla virescens</i> Ptrs.		3	II;53	
60	<i>Anguilla virescens</i> Pet.		276	II;49	
61	<i>Anguilla virescens</i> Peters	anguille la boue		V;[ad.38]	
62	<i>Antennarius coccineus</i> Less. & Garn.		57	III;44	specimen in spirits
63	<i>Antennarius tridens</i> Schleg.?			III;54	[head separately drawn]
64	<i>Anthias borboni</i> [c] us C.V.	dominique	104	IV;41	very deep water; rare
65	<i>Aphareus furcatus</i> Lacép.			I;22	
66	<i>Aphareus furcatus</i> Lacép.		171	IV;45	[head in pencil]
67	<i>Apogon frenatus</i> Val.			II;64	
68	<i>Apogon tamnopterus</i> Benn.	samedi	254	IV;41	
69	<i>Apogon virescens</i> C.V.	vacoa	177	IV;46-o	
70	<i>Argyroleucus aculeatus</i> C.V.		53	III;54	[head in two pencil sketches]
71	<i>Arius thalassinus</i> Rüpp.?	machouran		VI;11	[2 heads in pencil]
72	<i>Asterropteryx semipunctatus</i> Rüpp.		73	III;10	
73	<i>Aulacocephalus schlegelii</i> Gthr.	le roi la boue	123	IV;48	very deep water
74	<i>Aulostoma chinense</i> L.	trompette marrou	295	V;13	
75	<i>Balistes</i>			V;29	sp. in spirits
76	<i>Balistes aculeatus</i> Linn.		149	III;45	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
77	<i>Balistes bursa</i> Bl. Schn.	bourse café au lait	67	III:46	
78	<i>Balistes cinereus</i> Bonnat.		265	IV:51	
79	<i>Balistes conspicillum</i> Bl. Schn.	bourse piastre		I:38	
80	<i>Balistes erythrodon</i> Gthr.			IV:52	
81	<i>Balistes flavimarginatus</i> Rüpp.?	bourse		V:14	
82	<i>Balistes fuscus</i> Bl. Schn.	bourse manan	317	I:9	
83	<i>Balistes niger</i> M. Park	bourse	66	III:49	[incomplete]
84	<i>Balistes niger</i> M. Park		323	V:8	
85	<i>Balistes reclangulus</i> Bl. Schn.	bourse de sable		III:48	
86	<i>Balistes stellatus</i> Lacép.	bourse manan	335	V:8	
87	<i>Belone</i>	aiguille	52	I:41	missing
88	<i>Belone melanostigma</i> C.V.	aiguille	107	IV:46	[head in detail]
89	<i>Brotula multibarbata</i> Schleg.			VI:12	[jaws in pencil]
90	<i>Cæzio cylindricus</i> Gth.			I:25	
91	<i>Cæzio tricolor</i> C.V.	maquereau bleu		II:10	
92	<i>Callionymus curvicornis</i> C.V.	maquereau vert		III:55	[separate head]
93	<i>Calliodon viridescens</i> Rüpp.		201	IV:50-0	[dorsal head in pencil]
94	<i>Caranx</i>	carangue		I:11	
95	<i>Caranx</i>	carangue chercheur		V:32	Aug. 2, 1873
96	<i>Caranx crumenophthalmus</i> Bl.	carangue maquereau	244	IV:39-0	
97	<i>Caranx hippos</i> L.	carangue maquereau	247	IV:39-0	
98	<i>Caranx speciosus</i> Forsk.	carangue jaune		II:37	
99	<i>Carassius auratus</i> L.	madame ceré		III:5	introduced variety
100	<i>Carassius auratus</i> L.	madame ceré		III:5	
101	<i>Carassius auratus</i> L.	madame ceré		IV:18	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
102	<i>Caryx ciliaris</i> Bl.	carangue rond; flamme	92	IV;40	[Caranx?]
103	<i>Caryx melampygus</i> C.V.	carangue	91	IV;39	[Caranx?]
104	<i>Chatodon</i>			III;36	sp. nov.?
105	* <i>Chatodon auronmarginatus</i> Bliss	pavilion	155	III;28	
106	* <i>Chatodon auronmarginatus</i> Bliss	pavilion	155	IV;14	adult
107	<i>Chatodon dorsalis</i> C.V.	pavilion	65	IV;11	
108	<i>Chatodon dorsalis</i> C.V.	pavilion	31	IV;13	
109	<i>Chatodon falcula</i> Bl.			IV;20-o	
110	<i>Chatodon guttatissimus</i> Benn.	pavilion		III;36	
111	<i>Chatodon kleinii</i> Bl.	pavilion	193	IV;14	
112	<i>Chatodon kleinii</i> Bl.	pavilion	64	IV;11	
113	<i>Chatodon lineolatus</i> var. C.V.	pavilion		III;35	
114	<i>Chatodon lineolatus</i> C.V.	pavilion		IV;12	sent home, '69
115	<i>Chatodon lunula</i> Lacép.	pavilion	248	III;37	
116	<i>Chatodon lunula</i> Lacép.	pavilion	22	IV;13	
117	<i>Chatodon meyeri</i> Bl. Schn.	pavilion		III;34	female
118	<i>Chatodon setifer</i> Bl.	pavilion		III;31	
119	<i>Chatodon setifer</i> Bl.	pavilion	30	IV;13	
120	<i>Chatodon striangulus</i> Gm.	pavilion		III;29	sent home, '69
121	<i>Chatodon unimaculatus</i> Bl.	pavilion	24	III;31	
122	<i>Chatodon vagabundus</i> L.	pavilion	162	III;33	
123	<i>Chatodon vitatus</i> Schn.	pavilion	25	III;33	
124	<i>Chatodon zanthurus</i> Rlkr.				from life
125	<i>Chatodon zoster</i> Benn.	pavilion	69	V;31	
126	<i>Chanos lubina</i> C.V.	lubine	342	III;32	[cheek scale in pencil]
				V;19	

TELEOSTEI—BONY FISHES (*Continued*)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
127	<i>Cheilinus arenatus</i> C.V.	cateau	288	V:9	deep water
128	<i>Cheilinus punctatus</i> Benn.	inde tombé	282	I:30	
129	<i>Cheilinus punctatus</i> Benn.	inde tombé		II:12	
130	<i>Cheilinus trilobatus</i> Lacép.	maman rose	17	IV:25	
131	<i>Cheilinus radiatus</i> Bl. Schn.	cateau	289	V:3	
132	<i>Cheilio inermis</i> Forsk.	tazzard bleu	183	I:31	
133	<i>Cheilio inermis</i> Forsk.	tazzard jaune		I:31	[2 color phases ?]
134	<i>Cheilio inermis</i> Forsk.	tazare le chien	54	I:41	[head in pencil]
135	<i>Cheilio inermis</i> Forsk. var.	tazzard		II:14	
136	<i>Cheilio inermis</i> Forsk.	tazarre	117	IV:46	var.
137	<i>Cheilodipterus octovitatus</i> C.V.	samedi	261	V:5	
138	<i>Chelmo longirostris</i> Brouss.	pavillon long bec	182	IV:14	[head and snout in pencil]
139	<i>Chirocentrus dorab</i> Forsk.	sabré	95	IV:38	
140	<i>Chironectes</i> sp.			III:54	
141	<i>Chærops</i> sp. nov. Steind.	madaque la chaux	153	IV:15	lost; [Seychelles]
142	<i>Chorinemus sancti-Petri</i> C.V.	carangue; sap sap; manfine	90	IV:39	
143	<i>Chrysophrys sarba</i> Forsk.	gueule pavée	197	IV:16-o	[head, fins, tail, all separate]
144	<i>Cirrhitès amblycephalus</i> Blkr.		234	II:15	
145	<i>Cirrhitès arcatus</i> C.V.		234	II:40	young fish [head in pencil]
146	<i>Cirrhitès fosteri</i> var. Bl. Schn.		301	III:59	
147	<i>Cirrhitichthys maculatus</i> Lacép.	ciseaux	237	III:14	just dead
148	<i>Conger altipinnis</i> Kaup.	anguille morel	166	IV:59	[= <i>C. marginatus</i> Val.]
149	<i>Conger marginatus</i> Val.			II:51	
150	<i>Conger marginatus</i> Val.		285	V: [ad.40]	[head and jaws, pencil]
151	<i>Coris annulata</i> Lacép.	columbine	46	I:1	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
152	<i>Coris annulata</i> Lacép.	catou	184	I;4	var. probably
153	<i>Coris annulata</i> Lacép. var.		185	IV;49	
154	<i>Coris annulata</i> Lacép. var.	colombine		IV;35	female in spawn
155	<i>Coris aygula</i> Lacép.	catou	55	I;2	
156	<i>Coris aygula</i> Lacép.	cateau	345	IV;3	[pharyngeal teeth in pencil]
157	<i>Coris cingulum</i> var.?		274	IV;5	sent home, 1873
158	<i>Coris cingulum</i> Lacép.		264	IV;6	[color phase ?]
159	<i>Coris cingulum</i> Lacép.	vielle	28	V;6	
160	<i>Coris cuvieri</i> Benn.		245	IV;28	
161	<i>Coris cuvieri</i> Benn.	cateau bambana	346	V;1	variety
162	<i>Coris semiparita</i> Gthr.	le chien		I;3	variety
163	<i>Cossyphus (albomaculatus)?</i>			V;34	
164	<i>Cossyphus anthioides</i> Benn.	cossyphus de bouton lien		I;10	
165	<i>Cossyphus atrolumbus</i> C. & V.	maldague		I;14	
166	<i>Cossyphus atrolumbus</i> C.V.	maldague	85	IV;35	
167	<i>Cossyphus axillaris</i> Benn.			II;36	
168	<i>Cossyphus axillaris</i> Benn.	canard	192	II;36-o	young fish [mainly in pencil]
169	<i>Cossyphus diana</i> Lacép.	maldague	259	V;6	rare
170	<i>Cossyphus macrurus</i> Lacép.	maldague	331	I;10	
171	<i>Cossyphus macrurus</i> Lacép.	maldague du fond	203	IV;15	
172	<i>Cossyphus opercularis</i> Guich.	le chien	108	IV;41	very deep water, rare
173	<i>Cybtium commersonii</i>	thon	78	IV;17	dried head of young
174	<i>Cybtium commersonii</i> Lacép.	bécune		IV;36	young
175	<i>Dactylopterus orientalis</i> C.V.		208;57	III;53	[4 pencil sketches for detail]
176	<i>Diagramma crassispinus</i> Rüpp.	violon	100	IV;41	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
177	* <i>Diagramma erythrostoma</i> Bliss	carpe kallory		V;19	
178	<i>Diagramma gaterina</i> Forsk.	rouge gorge		I;48	dried specimen
179	<i>Diagramma lessonii</i> C.V.	vielle		V;27	
180	<i>Diagramma orientale</i> Bl.	lascar		III;51	
181	<i>Diagramma pardalis</i> K.v.H.	calloré, kallory		I;47	dried specimen
182	<i>Diagramma pardalis</i> C.V.	vielle pintadée		V;26	dried
183	<i>Diodon hystrix</i> L.	boutan piquant	62	IV;34	young
184	<i>Dules bennetti</i> Blkr.	gros yeux	279	V;7	
185	<i>Dules rupestris</i> Lacép.	carpe	49	III;3	fresh-water carp
186	<i>Echeneis naucrates</i> Linn.	viellou	36	I;39	
187	<i>Eleotris fusca</i> Bl. Schn.	cabot de l'eau douce		III;9	from life, fresh water
188	* <i>Eleotris guttatissimus</i> Bliss	cabot	206	III;8	[?] female
189	<i>Eleotris madagascariensis</i> C.V.	cabot de Seychelles	227	IV;19	young
190	<i>Eleotris madagascariensis</i> C.V.	l'endormi	296	V;11	from a live specimen
191	<i>Engraulis</i>			V;18	
192	<i>Epibulus insidiator</i> Pall.	gourami de mer	50	I;29	very rare
193	<i>Epibulus insidiator</i> Pall. var.	longue bouche	231	IV;19-o	[details in pencil]
194	<i>Epibulus insidiator</i> Pall. var.	long bec		V;4	
195	<i>Epinephalus gaimardi</i> Blkr.	vielle farraud	109	IV;43	
196	<i>Equula caballa</i> C.V.?	carandine		III;39	
197	<i>Equula fasciata</i> Lacép.	carangue; sap sap	98	IV;39	
198	<i>Exocetus</i>	poisson volant		V;23	in spirits
199	<i>Exocetus</i>	poisson volant		V;23	in spirits
200	<i>Exocetus brachysoma</i> Blkr.	poisson volant		IV;54x	[head in detail]
201	<i>Fistularia serrata</i> Cuv.	trompette	336	I;39	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
202	<i>Genyogoe anadis</i> C.V.	sarde bord du mer		II;40	
203	<i>Genyogoe bengalensis</i> Bl.	piment	284	II;17	[head also in pencil]
204	<i>Genyogoe macolor</i> C.V.?	lion blanc		V;33	
205	<i>Genyogoe melanospilos</i> (Blkr.)?	giblot poissonnieux		IV;19	
206	<i>Genyogoe melanura</i> Rüpp.	chemise		I;50	very poisonous
207	<i>Genyogoe notata</i> C.V.	piment	70	II;58	
208	<i>Genyogoe notata</i> C.V.	piment		V;29	from life
209	<i>Gerres lineolatus</i> Gthr.			II;31	
210	* <i>Glaucosoma semilunifera</i> S'eind.	boiteur du fond, dominigue	115	II;7	young [also from Seychelles]
211	<i>Glyphidodon celestinus</i> C.V.	chauffe soleil	83	I;22	
212	<i>Glyphidodon celestinus</i> C.V.	chauffe soleil	83	II;59	[head in pencil]
213	* <i>Glyphidodon maculipinnis</i> Bliss	boiteur	272	V;6	
214	<i>Glyphidodon sordidus</i> Forsk.	couse couse	262	V;6	
215	<i>Gomphosus cæruleus</i> Lacép.	canard vert	129	I;48	
216	<i>Gomphosus varius</i> Lacép.	canard		II;27	var.
217	<i>Gomphosus varius</i> Lacép.	canard		II;38	female, full size
218	<i>Gobius (ocellaris)?</i> C.V.		32	III;13	fresh water [head also pencil]
219	<i>Gobius ocellaris</i> C.V.	cabot eau douce	280-1	IV;21	
220	<i>Gobius ocellaris</i> C.V.	cabot eau douce		IV;21	head of male
221	<i>Grammistes orientalis</i> Bl. Schn.	savou		II;8	shallow water
222	<i>Grammistes orientalis</i> Bl. Schn.		333	II;8	head only sent [pencil]
223	<i>Grammistes orientalis</i> Bl. Schn.	ginghau		II;9	
224	<i>Graminostopsis striatulus</i>		159	IV;44	very rare
225	[<i>Gymnothorax</i>]	anguille ciseaux	1	II;52	
226	<i>Gymnothorax afra</i> Bl.	cave eel		I;37	from a dried specimen

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
227	<i>*Gymnothorax albonaculatus</i> Bliss	anguille moucheté	139	IV;55	
228	<i>*Gymnothorax elegans</i> Steind.	patna	120	IV;57	very deep water
229	<i>Gymnothorax fimbriata</i> Benn.	anguille petit chien	2	II;52	
230	<i>Gymnothorax geometrica</i> Rüpp.	anguille patna	137	II;52	[head in detail]
231	<i>Gymnothorax geometrica</i> Rüpp.		113	IV;55	very deep water
232	<i>Gymnothorax insignis</i> Steind.			IV;58	specimen in spirits
233	<i>Gymnothorax nubile</i> Richard.			V;[ad.38]	very deep water
234	<i>*Gymnothorax pikei</i> Steind.	l'amanda morue	122	IV;56	[jaws in detail]
235	<i>Gymnothorax richardsonii</i> Blkr.	anguille voleur	4	IV;60	
236	<i>*Gymnothorax signifer</i> Bliss.			II;48	var. <i>isingteena</i>
237	<i>Gymnothorax tessellata</i> Rich.			I;36	
238	<i>*Gymnothorax viridipinnis</i> Bliss		160	II;41	
239	<i>*Gymnothorax viridipinnis</i> Bliss			II;50	
240	<i>Heliastes axillaris</i> Benn. ?			II;19	
241	<i>Hemigymmus fasciatus</i> Thunb.	garde police		II;18	young
242	<i>Hemigymmus fasciatus</i> Thunb.	domingue		III;25	
243	<i>Hemigymmus fasciatus</i> Thunb.	cateau rayé	68	III;26	full-grown female
244	<i>Hemiramphus</i>	balao		I;26	
245	<i>Hemiramphus commersonii</i> Cuv.	balao		I;26	
246	<i>Hemiramphus longirostris</i> Cuv.	pavilion cocher	164	V;22	in spirits
247	<i>Heniochus macrilepidotus</i> Art.		187	IV;9	[also head in pencil]
248	<i>Heniochus monoceros</i> Bl. Schn.	cheval volant	165	III;30	from life
249	<i>Hippocampus guttulatus</i> Cuv.	cheval volant	325	III;57	[also head in pencil]
250	<i>Hippocampus guttulatus</i> Cuv.	cheval volant	168	III;57	from life
251	<i>Hippocampus camelopardalis</i> Bianc.				

TELEOSTEI—BONY FISHES (*Continued*)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
252	<i>Histiophorus brevirostris</i> Playf.	l'espadron		VI:6	from drawing in museum
253	<i>Histiophorus brevirostris</i> Playf.			VI:13	
254	<i>Histiophorus gladius</i> Brouss.	l'empereur	77	IV:50-0	[head and eye only]
255	<i>Histiophorus gladius</i> Lacép.			VI:24	8 ft. 9 in.
256	<i>Holacanthus alternans</i> C. V.	guingan du fond	189	IV:7-0	[colored pectoral separate]
257	<i>Holacanthus imperator</i> Bl.		71	IV:7	young [insert]
258	<i>Holacanthus imperator</i> Bl.	guinghan		IV:7	[adult?]
259	<i>Holacanthus melanospilos</i> Blkr.	zébre	349	V:18	var. or sp. nov.
260	<i>Holacanthus nicobariensis</i> Bl. Schn.?	couse couse, boiteur	21	III:11-0	[insert on writing paper]
261	<i>Holacanthus nicobariensis</i> Bl. Schn.?	pavilion bleu		III:12	fish just dying
262	<i>Holacanthus semicirculatus</i> C. V.?	pavilion bleu	327	III:11	
263	<i>Holocentrum argenteum</i> C. V.	lion aux ailes rouges	137	IV:20	[details in pencil]
264	* <i>Holocentrum elongatum</i> Steind.	le lion	173	IV:20	[eye details, pencil]
265	<i>Holocentrum hastatum</i> (?)			II:22	
266	<i>Holocentrum hastatum</i> Forsk.	rouget canal		II:20	
267	<i>Holocentrum sammara</i> Forsk.		189	II:21	[details in pencil also]
268	<i>Holocentrum sammara</i> Forsk.	lion benoit	156	IV:54	
269	<i>Holocentrum spiniferum</i> Forsk.	inde tombé		II:61	
	[<i>Julis</i> ?]		253	III:24	
270	<i>Julis dorsalis</i> Q. & G.			III:27	
271	<i>Julis dorsalis</i> Q. & G.			II:57	
272	<i>Julis hebraica</i> Lacép.	cateau		II:57	
273	<i>Julis lunaris</i> L.	lalo	23	II:60	[pencil insert of head]
274	<i>Julis trilobata</i> Lacép.	catout, garde police	250	I:5	
275	<i>Julis trilobata</i> Lacép.	cateau, garde police	252	I:18	adult female
276	<i>Latilus dotatus</i> C. V.	sablé	157	I:42	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
277	<i>Lethrinus</i> sp.	barrois		IV;20-o	[jaws, color, separate]
278	<i>Lethrinus</i> sp.	capitaine blanc		IV;20-o	
279	<i>Lethrinus erythropterus</i> C.V.	damberri	87	I;8	young fish
280	<i>Lethrinus nebulosus</i> Forsk.	capitaine	102	II;42	[lower jaw separate]
281	<i>Lethrinus oculatus</i>	barrois	291	IV;42	[upper jaw in pencil]
282	<i>Leuonius semicinctus</i> Benn.		328	II;51	very deep water
283	<i>Malacanthus hoedtii</i> Blkr.	lézard	43	I;15	
284	<i>Malacanthus latovittatus</i> Lacép.	tazarre marrou		I;6	
285	<i>Mesoprioc johnii</i> Bl.	giblot		II;10	
286	<i>Monacanthus (Balistes?)</i>	bourse sac	207	III;47	[also pencil sketch]
287	<i>Monacanthus longirostris</i> Cuv.	bourse Marie Louise	308	V;7	very rare
288	<i>Monacanthus pardalis</i> Rüpp.	bourse pavillon	267	V;8	
289	* <i>Monacanthus rubricauda</i> Bliss		232	IV;51	[spine and teeth in detail]
290	<i>Monacanthus scopas</i> Cuv.		126	IV;51	[spines in detail]
291	<i>Monacanthus (scopas?)</i>	bourse		V;29	
292	<i>Monacanthus scriptus</i> Osb.	bourse eventail	114	IV;47	
293	* <i>Moringua ferruginea</i> Bliss.		131	II;48	taken out of a fish
294	<i>Mugil</i>	mulet sec		I;24	
295	<i>Mugil cephalotus</i> C.V.	mulet voleur		1;24	
296	<i>Mullus</i>	rouget		I;16	
297	<i>Mullus chryserydros</i> Lacép.	rouget		II;35	rare
298	<i>Mullus (Mulloides) flavolineatus</i> Lacép.	rouget	94	IV;37	[lat. line scale in pencil]
299	<i>Mullus (Upeneus) macronemus</i> Lacép.			I;17	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
300	* <i>Mullus (Upeneus) microps</i> Bliss		186	IV;37	
301	<i>Mullus (Upeneus) trifasciatus</i> Lacép.	rouget chinois	202	IV;36-o	
302	<i>Mullus (Upeneoides) vittatus</i> Forsk.	rouget queue grise		II;35	
303	<i>Mullus (Upeneoides) vittatus</i> Forsk.		93	II;35	[head only, insert]
304	<i>Muraena tentaculata</i>	bardé		II;46	very rare
305	<i>Muraenesox cinereus</i> Forsk.			V;[ad.39]	[Seychelles?]
306	<i>Myripristis murdjan</i>	le lion	188	II;21-o	[in pencil on letter paper]
307	<i>Myripristis murdjan</i> Forsk.	le lion	42	IV;32	[head in detail]
308	<i>Myripristis murdjan</i> Forsk.		174	IV;32	[head in pencil]
309	<i>Myripristis murdjan</i> Forsk.		205	IV;32	
310	<i>Myripristis pralinus</i> C.V.?	le lion		V;31	from life
311	<i>Naseus lituratus</i> Forst.	chirurgien tabac	14	IV;23	
312	<i>Naseus lituratus</i> Forst.	chirurgien du fond	338	V;21	
313	<i>Naseus tuberosus</i> Lacép.	corne mouton	63	IV;24	
314	<i>Naseus unicornis</i> Forsk.	corne	239	III;2	very young
315	<i>Naucrates ductor</i> L.	boiteur canonier	302	III;54	
316	<i>Novacula aneitensis</i>	cateau chinois	294	V;4	var. or sp. nov.
317	<i>Novacula pavo</i> C.V.	columbine		I;15	
318	<i>Novacula pavo</i> C.V.	columbine; la chaux	158	IV;28	
319	<i>Novacula tenuirus</i> Lacép.		172	I;27	
320	<i>Novacula tenuirus</i> Lacép.	cateau		I;27	
321	<i>Ophichthys colubrinus</i> Bodd.	anguille à 2 taches		II;45	var. <i>fasciatus</i>
322	<i>Ophichthys colubrinus</i> Bodd.			II;54	[insert sheet also]
323	<i>Ophichthys colubrinus</i> Bodd.	anguille ruban à 13 taches		II;44	var. <i>faciata</i>
324	<i>Orthogoriscus truncatus</i> Retz.	molle; poisson lune		VI;8	from stuffed specimen

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
325	<i>Osphromenus olfax</i> Hardw.			IV;16	
326	<i>Ostracion cornutus</i> L.	coffre	81	IV;2	[separate head]
327	<i>Ostracion cubicus</i> L.			IV;2	
328	<i>Ostracion (cubicus)</i>	samedi		V;29	[pencil]
329	<i>Ostracion diapanus</i> Bl. Schn.		210	IV;2	[dorsal view]
330	<i>Ostracion diapanus</i> Bl. Schn.		210	IV;2	[lateral view]
331	<i>Ostracion gibbosus</i> L.		209	IV;2	[2 incomplete pencil sketches]
332	<i>Ostracion nasus</i> Bl.		275	IV;2	young
333	<i>Ostracion nasus</i> Bl.			IV;2	[adult ?]
334	<i>Ostracion punctatus</i> Bl. Schn.			III;56	
335	<i>Ostracion sebae</i> Blkr.	coffre; boche bois		III;56	
336	<i>Pagrus</i>		347	V;16	missing
337	<i>Pagrus filamentosus</i> C.V.		341	V;20	[jaws in pencil]
338	<i>Pegasus draconis</i> L.	Gueule payée du fond	332	V;16	[dorsal and ventral views]
339	<i>Percis punctulata</i> C.V.		277	II;11	
340	<i>Periophthalmus kaetreuteri</i> Pall.		229	IV;24	[head, pencil. Seychelles]
341	<i>Pimephera mangula</i>	gros oeil	283	II;68	[Pem. heris?]
342	<i>Platax vespertilio</i> Bl.	poule d'eau		I;22	very rare
343	<i>Platax vespertilio</i> Cuv.		339	V;16	young
344	<i>Platycephalus malabaricus</i> C.V.			V;22	
345	<i>Platygllossus</i>			III;10	
346	<i>Platygllossus hortulanus</i> Lacép.	catou		II;62	
347	<i>Platygllossus hortulanus</i> Lacép.		246	V;1	var.
348	<i>Platygllossus hortulanus</i> Lacép.	cateau columbine	243	V;1	[color phase]
349	<i>Platygllossus scapularis</i> Benn.		286	V;5	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
350	<i>*Plectropoma lineatum</i> Steind.	vieille farraud	167	IV;8	[jaws separate]
351	<i>Plectropoma maculatum</i> Bl. var.	boutan	292	IV;27	stuffed [jaws in detail]
352	<i>Plotosus anguillar</i> Bl.	machoiran		III;8	young
353	<i>Plotosus anguillar</i> Bl.	machoiran		III;8	adult
354	<i>Pacilophis</i>	anguille patna		II;50	[jaws drawn separately]
355	<i>Pacilophis fascigula</i> Ptrs.	anguille	12	II;43	
356	<i>Pacilophis nebulosa</i> Ahl.	anguille morele grise		II;47	
357	<i>*Pacilophis pikei</i> Steind.	anguille raide raide		I;36	
358	<i>Pacilophis pikei</i> Steind.		161	II;50	young
359	<i>Pacilophis variegata</i> Kaup.		11	IV;59	[pencil]
360	<i>Pacilophis zebra</i> Shaw		125	V[ad.39]	spirits specimen
361	<i>*Pogonoperca reticulata</i> Steind.			IV;48	
362	<i>Polynemus sexfiliis</i> C. V.	carandine du fond	97	III;58	[head on separate insert]
363	<i>Pomacentrus</i>		307	V;5	[in pencil]
364	<i>*Pomacentrus nigripinnis</i> Bliss.	petit couse couse	318	V;16	
365	<i>*Pomacentrus pikei</i> Bliss.	chauffe soleil	300	V;9	
366	<i>Pomacentrus scolopsis</i> Q. & G.	hoiteur blanc	320	V;16	
367	<i>Priacanthus carolinus</i> ?			II;16	
368	<i>Priacanthus carolinus</i> C. V.	le fanal	204	IV;19-o	[mouth in pencil]
369	<i>Priacanthus carolinus</i> C. V.	le fanal		V;33	young?
370	<i>Psettodes erumei</i> Bl. Schn.			V;25	dried specimen
371	<i>Psettus argenteus</i> L.	la line	233	III;38	
372	<i>Pseudodax moluccensis</i> Blkr.	cateau la flamme	260	V;2	[scales in pencil]
373	<i>Pseudoscarus</i>	cateau de feu	124	IV;50	
374	<i>Pseudoscarus</i>	cateau malgashe	248	V;2	missing

TELEOSTEI—BONY FISHES (Continued.)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
375	* <i>Pseudoscarus flavomaculatus</i> Bliss.	cateau rouget	313	V;4	
376	<i>Pseudoscarus pyrrhostethus</i> Rich.	cateau blanc	36	II;65	
377	<i>Pseudoscarus troschelii</i> Blkr.	catou vert	135	II;67	
378	<i>Pteragogus</i> ?	canard; cabot		III;6	var.
379	<i>Pterois antennata</i> Bl. var.?	laf volant		III;23	[pencil sketches]
380	<i>Pterois miles</i> Benn.	laf volant des brisants	56	I;21	from life
381	<i>Pterois miles</i> B.?	laf volant		I;32	
382	<i>Pterois miles</i> Benn.		127	III;20	[fin separately sketched]
383	<i>Pterois miles</i> Benn. var.	laf corail		III;21	from life
384	<i>Pterois volitans</i> L.	laf volant		III;18	from life
385	<i>Pterois volitans</i> L.			III;22	
386	<i>Pterois zebra</i> C.V.?	laff		III;17	from life
387	<i>Rhomboidichthys pantherinus</i> Rüpp.		268	I;35	[in pencil]
388	<i>Rhomboidichthys pantherinus</i> Rüpp.	sole du lait	316	I;35	female
389	<i>Salarias</i>			III;10	
390	<i>Salarias</i>			III;10	
391	<i>Salarias quadricornis</i> C.V.	cabot		III;10	
392	<i>Salarias quadricornis</i> C.V.	cabot		III;10	[color phase?]
393	* <i>Sargus striatus</i> Bliss.	captain olive	257	II;32	
394	* <i>Sargus striatus</i> Bliss.	carpe de mer à queue jaune	257	V;5	
395	<i>Saurida nebulosa</i> C.V.	arna sala, vivace		I;30	
396	<i>Sauris myops</i> Bl. Schn.			V;29	spirits specimen
397	<i>Scarichthys cæruleo-punctatus</i> Rüpp.		73	IV;31	[jaws in detail]
398	<i>Scolopsis</i>			II;39	
399	<i>Scopelus asper</i> Richard.	maquereau du fond	278	IV;25	

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
400	<i>Scolopsis phaeops</i> Benn.	carandine du fond	255	IV;21	
401	<i>Scolopsis phaeops</i> Benn.	carandine du fond	287	V;9	
402	<i>Scorpena</i> sp.	laff		III;17	from life
403	* <i>Scorpena acillaritis</i> Bliss.	laff		III;19	from life
404	<i>Scorpena erythraea</i> C.V.?	laff		III;15	from life
405	<i>Scorpena gibbosa</i> Bl. Schn. var.	laff à bouche jaune		III;16	[details in separate sketches]
406	<i>Serranus</i>	St. Silas; domingue		II;1	not allowed in bazar
407	<i>Serranus</i>	vielle la boue		V;30	stuffed sp. [head in pencil]
408	<i>Serranus</i>	vielle bambarra		V;31	specimen in spirits
409	<i>Serranus arolatus</i> Forsk.	vielle	238	IV;8	(= <i>oceanicus</i> Lacép)
410	<i>Serranus arolatus</i> C.V.	vielle	99	IV;30	[jaws in pencil]
411	<i>Serranus fasciatus</i> Forsk.	vielle		I;28	
412	<i>Serranus flavo-ceruleus</i> Lacép.	vielle plate grise		II;3	drawn by Mrs. Col. Lowe
413	<i>Serranus flavo-ceruleus</i> Lacép.		20	II;4-o	[head in pencil]
414	<i>Serranus fuscoguttatus</i> Rüpp.	vielle	118	IV;44	
415	<i>Serranus guttatus</i> Bl.	vielle cuisinière	37	IV;29	
416	<i>Serranus hexagonatus</i> Forst.	vielle pintade	269	II;7-o	
417	<i>Serranus leopardus</i> Lacép.	vielle cabot		II;2	
418	<i>Serranus leopardus</i> Lacép.	vielle	290	II;2-o	not allowed in bazar
419	<i>Serranus leopardus</i> Lacép.	vielle	116	IV;30	poisonous
420	<i>Serranus louti</i> Forsk.	croissant à queue jaune		I;49	stuffed fish
421	<i>Serranus louti</i> Forsk.			IV;33	not allowed in bazar
422	<i>Serranus lutra</i> C.V.	vielle voleur	72	II;1	
423	<i>Serranus macrospilus</i> Blkr.	vielle coq	111	IV;30	deep water
424	<i>Serranus mauritiae</i>				

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
425	<i>Serranus melanotenia</i> Blkr.	vielle	121	IV;44	rare
426	<i>Serranus melanurus</i> Geoff.	vielle		I;13	
427	<i>Serranus oceanicus</i> Lacép.	vielle rouge		II;4	
428	<i>Serranus oceanicus</i> Lacép.	vielle rouge	105	IV;43	
429	<i>Serranus peccilonotus</i> Schleg.	vielle St. Silac		I;28	not allowed in bazar
430	<i>Serranus rhyncholepis</i> Blkr.		18	IV;25	
431	<i>Serranus rivulatus</i> C.V.	varra varra	263	V;7	var.
432	<i>Serranus sonnerati</i> C.V.	vielle annana		II;4	
433	<i>Serranus sonnerati</i> C.V.	vielle	29	II;6	
434	<i>Serranus sonnerati</i> C.V.	vielle annana	273	II;6-o	[insert on letter paper]
435	<i>Sillago schama</i> Forsk.	peche madame	228	IV;24	Seychelles
436	<i>Sparoperca</i>	chemise		II;34	gen. nov. Steind [?]
437	<i>Sparoperca pikei</i> Steind.	lezard	112	IV;45	very deep water, sp. nov. [?]
438	<i>Sparoperca elegans</i> Steind.	sacrestin	106	II;33	
439	<i>Sparoperca zonata</i> C.V.	vivano	110	IV;45	[head in pencil]
440	<i>Sparoperca zonatus</i>			IV;45	[head in pencil]
441	<i>Sphyræna agam</i> Rüpp.	tazzarre	96	IV;38	[head and jaws, pencil]
442	<i>Stenostoma (brachyurum?)</i> Blkr.			V;23	[pencil sketch]
443	<i>Synanceia verrucosa</i> Bl.	laf des brisants	148	I;19	[color phase?]
444	<i>Synanceia verrucosa</i> Bl.	laf la boue, mud laf	54	I;20	dried specimen
445	<i>Synaptura commersoniana</i> Cant.	sole		V;23	[details in pencil]
446	<i>Syngnathus</i>			IV;53	[details of eye separately]
447	<i>Tetraodon longispinus</i> C.V.	laf du fond	147	III;20	from life
448	<i>Tetrodon hispidus</i> Lacép.	bourse	47	III;42	
449	<i>Tetrodon immaculatus</i> Bl. Schn.	la bourse du geomon	79	III;40	painted by Mrs. Lowe

TELEOSTEI—BONY FISHES (Continued)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
450	<i>Tetodon linearis</i> Bl. Schn.	bourse toto	154	IV;54-o	poisonous
451	<i>Tetodon mappa</i> Lin.			IV;53	
452	<i>Tetodon nigropunctatus</i> Bl. Schn.	bourse	198	III;45-o	
453	<i>Tetodon scleratus</i> Forsk.		163	IV;53	
454	<i>Tetodon sceleratus</i> Forst.		163	IV;53	[dorsal view also]
455	<i>Tetodon stellatus</i> Bl. Schn.	bourse bouton veille	48	III;41	from life
456	<i>Tetodon stellatus</i> Bl. Schn.	bourse	181	III;43	young
457	<i>Tetodon stellatus</i> B. Schn.		157	III;43	from life
458	<i>Teuthis coralina</i> C.V.	cordonnier casier		V;28	dried specimen
459	<i>Teuthis nebulosa</i> Q. & G.	cordonnier	101	III;1-o	[insert on writing paper]
460	<i>Teuthis rostrata</i> C.V.	cordonnier café	103	III;1	spines dangerous
461	<i>Therapon servus</i> Bl.		225	IV;28	
462	<i>Trachynotus baillonii</i> Lacép.	carangue		I;12	
463	<i>Trachipterus</i>			VI;14	
464	<i>Triacanthus biaculeatus</i> Bl.	bourse	151	V;34	sp. in spirits
465	<i>Triodon bursarius</i> Reinw.	boutan, bourse de fond		I;43	
466	<i>Trichiurus haumela</i> Forsk.			V;17	
467	<i>Upeneus chryserydros</i> C.V.	rouget jaune	26	I;17	very rare
468	<i>Zanclus cornutus</i> L.	pavilion cocher		IV;10	
469	<i>Zanclus cornutus</i> L.	pavilion	41	IV;11	[<i>Zanclus</i> ?]
470	[No scientific name assigned]	maquereau blanc		I;25	rare
471	[No scientific name assigned]	domaine		II;5	
•472	[No scientific name assigned]			II;56	very rare
473	[No scientific name assigned]			III;6	[pencil sketch; incomplete]
474	[No scientific name assigned]	cabot volant		III;7	

TELEOSTEI—BONY FISHES (*Continued*)

No.	SCIENTIFIC NAME	CREOLE NAME	AGASSIZ No.	VOL. AND PAGE	REMARKS
475 to 480	[No scientific name assigned]			III;7	[6 drawings]
481	[No scientific name assigned]			III;10	
482	[No scientific name assigned]			III;52	[also head in pencil]
483	[No scientific name assigned]			III;55	
484	[No scientific name assigned]	vielle soulard	75	IV;4	
485	[No scientific name assigned]			V;4	[pencil sketch]
486	[No scientific name assigned]	bourse bontems		V;12	[puffer] very poisonous