

DATA ON THE GENESIS OF THE ATLAS ICHTHYOLOGIQUE FROM A LITTLE KNOWN FRENCH PAPER BY P. BLEEKER

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ABSTRACT. – After Bleeker passed away, along with his biography, a French paper was published containing information on the genesis of his major work, the *Atlas Ichthyologique des Indes Orientales Néerlandaises*. To make this important data more available, this paper is here translated to English.

KEY WORDS. – *Atlas Ichthyologique*, P. Bleeker, biography, fish drawings, draughtsmen, lithographers, Indonesian archipelago.

INTRODUCTION

When Bleeker passed away on January 23, 1878, the *Jaarboek* (Yearbook) of the Koninklijke Academie van Wetenschappen, Amsterdam, for 1877 was in preparation. The editors therefore were able to include a number of papers concerning the scientific life and achievements of Dr. Pieter Bleeker, one of its foremost members, in this publication. Included were: a preface with an obituary, by Dr P. Harting; an autobiography of Dr Pieter Bleeker, (both in Dutch); a chronological list (1846-1877) of 490 Ichthyological papers by Bleeker, with various indices; a catalogue of his papers per journal in chronological order; a note on the genesis of the *Atlas Ichthyologique* (in French); and a chronological list of Bleeker's non-ichthyological publications. Together these papers filled 159 pages of the *Yearbook* 1877.

In 1881, the *Natuurkundig Tijdschrift voor Nederlandsch-Indië*, the journal of the Koninklijke Natuurkundige Vereeniging in Nederlandsch-Indië of which Bleeker was one of the founders, republished all these papers except for the obituary by Harting.

In 1973, an English translation of Bleeker's biography was published in the first volume of the "Collected fish papers of Pieter Bleeker" (Lamme, 1973). This volume also contained a reprint of the auction catalogue of the Bleeker collection (Hubrecht, 1879) and an introduction and informative remarks on the auction by Boeseman (1973a, b), but Bleeker's Note on the *Atlas* was not included.

The information in Bleeker's "Notice sur l'*Atlas Ichthyologique des Indes Orientales Néerlandaises*" is very

relevant for all ichthyologists engaged in revisions of taxa that are pictured in the *Atlas*. For instance, Bleeker (1878c: 136) states that the drawings for the *Atlas* always had to be remade when he received specimens that were "fresher, better preserved or of a size more suitable for publication". This means that it is unlikely that the holotype (or even one of the syntypes) was figured in species for which Bleeker later received additional specimens.

In contrast to the praising words dedicated to his draughtsmen in the preface to the first volume of the *Atlas* (Bleeker, 1862), Bleeker's opinion about his artists, especially Mr L. Speigler, in his 1878c paper is quite negative. Proof of the scrupulously critical examination of the work of his draughtsmen and lithographers referred to by Bleeker (op. cit.) is present on drawings and proof prints of plates kept in the archives of the Nationaal Natuurhistorisch Museum. Some of these drawings with corrections have been published in the last volume of the reprint series of the *Atlas* (Bleeker, 1983). Bleeker (1862, 1878a, b, c, 1881) explicitly takes full responsibility for the correctness of the drawings. Indeed it has been possible to match specimens from the RMNH Bleeker collection with drawings in the *Atlas* on the basis of their size, fin ray counts and scale counts.

Another important aspect of Bleeker (1878c, 1881) is the list of the European zoological museums to which he successively sent collections.

As the original papers nowadays are rather difficult to obtain and only accessible for those who read French, an English translation is presented below.

NOTE ON THE ATLAS ICHTHYOLOGIQUE DES INDES ORIENTALES NÉÉRLANDAISES

Soon after my arrival in Batavia, the idea occurred to me to write a physical and medical topography of the capital of the Netherlands Indies, which necessitated, among others, to examine its fauna and to visit the fish markets repeatedly.

Amazed by the multiple forms already apparent from a superficial examination of the ichthyological fauna, I wanted to know their scientific names. However, as at that moment I did not possess any books on the subject, and in Batavia I could not find any ichthyological work but Lacépède's *Histoire des Poissons*, I had no choice but to order the necessary literature from Europe. While I was awaiting their arrival I collected as much species as possible.

When after waiting for more than a year, I could at last begin with the identification of the specimens, my collection already comprised more than 300 species of fish, both from fresh and salt water. A large number of these species were not mentioned in the books I had received and it soon became clear that many of the forms had not yet been registered in science. This revelation urged me to increase my collection more and more and to publish the species that I believed to be new. Concerning the publication of simple descriptions of the new forms, I could dispose of the *Archives des Sciences physiques et médicinales* (Natuur- en Geneeskundig Archief voor Nederlands Indië), a journal that I had founded in 1844, and the *Mémoires de la Société Batavienne des Arts et des Sciences*. But my means were not at all sufficient for the collections and the expensive literature necessary for the identification. The salary of sublieutenant, the rank that I occupied as a military surgeon, hardly permitted the acquisition of even a very basic zoological or ichthyological library, nor the luxury of a collection of objects of natural history, for the preservation of which large quantities of alcohol and many jars were needed.

As soon as I had decided the project had to be extended to the entire island of Java, and to the entire Indian Archipelago, I believed that in the light of my insufficient means I had to turn to the colonial government and appeal to its scientific generosity. I proposed them to support my research financially by giving a grant for the publication of an ichthyological Fauna of the Dutch East Indies, illustrated with figures of the least known and new species. The plan for this publication submitted to the government was more or less similar to the one that has been followed in the Atlas. My request, was not just a plea for a free allowance, but it was accompanied by the offer that my collections would be donated to the government, to be incorporated in the Natural History Museum in Leiden. It seemed to me that in this way my request would have a greater chance of success, and that the compensation offered would be gladly accepted.

The endeavour, however, did not succeed at all. I must admit that my age and my position were not such that they inspired a lot of confidence in the author, a young medical officer, third class (sub-Lieutenant), who till then had published

hardly anything. The government although declining my request and offer, confounded itself to testifying slight interest in my research by giving me a gratification of 500 Dutch guilders, a gift that I did not ask for and that I would have liked, but did not dare, to refuse.

Although left to my own forces and means, I would continue my research and the accumulation of material. If it was not possible to publish a work like I had intended, instead I could always reach my goal by publishing in the *Archives des sciences naturelles* and the *Mémoires de la Société Batavienne des Arts et des Sciences*, and I could keep up hope that the activities that I intended to develop, sooner or later would result in governmental support.

However, circumstances did not favour me. I had hardly published a few small ichthyological papers, when I had to leave Batavia, to settle in Samarang. Because it was impossible to have my collections moved, it was better to leave them in Batavia. After only a few months of service in Samarang, I was given a new destination again when I was charged with medical service in Soerabaia. Here I also stayed only a few months after which I was sent to the fortress of Ambawara. By these successive replacements, two years went by during which my ichthyological research could only be continued at a low level, because I lacked the time and means to execute it seriously. If I had had to stay far away from Batavia, it would have been impossible to carry out, even partly, the plan of the intended work.

In the year 1849, when I was re-instated in Batavia, I started to dedicate myself more especially to ichthyological studies. From that period, my relations with the main islands from the Dutch possessions would become more numerous and would contribute to the notable enlargement of my collections. In 1850, the *Société royale de physique des Indes néérlandaises* (Koninklijke Natuurkundige Vereeniging in Nederlands Indië) was founded in Batavia. Soon, I was chosen as its chairman. Thanks to this society I could inspect, almost immediately after their arrival in Batavia, the shipments that arrived by the zealous care of numerous collectors dispersed over the European establishments on the Sunda and the Molucan Islands. I only had to send alcohol and jars to the military and civil servants with which I entertained relations, to be sure to receive more or less valuable collections. In this way my cabinet was enriched with numerous species from the Islands of Sumatra, Batou, Nias, Singapore, Bintang, Bangka, Bali, Borneo, Celebes, Sangi, Ternate, Halmahera, Batjan, Bouro, Ambon, Ceram, Saparou, Banda, Goram, Flores, Solor, Timor, Aron, Waigiou, etc. — Other collections were sent to me from Bengal and Japan, and I also received them from Tasmania and the Cape. Before my departure to Europe, in 1860, I possessed more than 2500 fish species, of which about 2000 were from the Indian Archipelago. The number of new species I had described in the Indies had risen to above 1100.

All species from the Indian archipelago in my cabinet were destined to be figured for my intended Atlas. But large difficulties arose with regard to the execution of the drawings.

Nowhere in the Dutch East Indies capable and available draughtsman were to be found, and if they would have been present, I would not have been able to engage them because of my limited resources. Therefore, I would have to contend myself with very mediocre talents, and still I could not find these in Batavia, unless amongst the soldiers of the garrison, if their superiors would be so kind as to put them at my disposition.

For a long time I had to be content with mediocre drawings and a very imperfect execution. These drawings always remained to be remade when I received specimens that were fresher, better preserved or of a size more suitable for publication. Hundreds of species have been refigured again and again, even as much as eight to ten times, as my draughtsmen learned to represent the objects with more precision. At the time of my departure to Europe, I possessed figures of nearly all species of the Indian archipelago from my cabinet, and although nearly none of those figures, numbering more than 3000, has being copied for the Atlas, they have been used as a basis with regard to the fresh coloration for the figures that I have had executed after my return to Europe.

Two of the three draughtsmen that I had at my disposition in the Indies, could only assist me for a couple of years. The third one, Mr L. Speigler, has survived and has come to join me in Europe, where, since 1862, he continues to remake the figures made in the Indies, doing his utmost to give them the highest possible exactness. Although the zealotness and the perseverance of Mr Speigler has never weakened, and although he has the merit of working more then a quarter of a century on the iconography of the work, of which nearly all figures are made by him, I owe it to the sake of truth and my responsibility, not to leave unmentioned the extreme worries caused by a co-operation that necessitated a continuous, scrupulously careful supervision and instruction. Mr Speigler unfortunately did not have a talent equalling his zeal, and he absolutely lacked the ability of observation necessary to reproduce exact both the appearance and the details of the objects he had to depict. Moreover, not a single one of his drawings could be submitted for publication without having been corrected by me and these corrections not only concerned the sketches, but every detail of the execution. I can say that these drawings in the end were more my own work than that of the artist, and that the retouching has taken more of my time than the description of the species they represent. Tormented among others by financial and matrimonial worries, my draughtsman often and during several weeks at a stretch, was incapable to pay a regular attention to his work. In these rather frequent periods of discouragement and despair, I could do nothing but leave him alone and to ban his incorrect and useless products amongst my collection of disapproved drawings. I have kept all these drawings, also those of my previous draughtsmen, as a witness, if necessary, of the long and difficult gestation that preceded the iconographic part of the Atlas.

The gilded refusal, by which the government of the Dutch East Indies responded to my request to publish the intended

Atlas under their protection, had not discouraged me at all. I would continue preparing the execution of my plan. Being still young, I could wait and hope to get the titles that would favour my authority, titles that were lacking me at that moment. Fortunately, however, it was not necessary to turn to the government a second time.

In the mean time, the attention of the naturalists in Europe had been roused by the numerous new species described in my ichthyological publications, especially in those that had appeared after my return to Batavia.

Various museums, wishing to possess my doublets, wrote to me with the request to present these to them, and I had had the pleasure of successively offering collections to the following zoological museums: Paris, Bonn, Heidelberg, Darmstadt, Stuttgart, Munich, Würzburg, Vienna, Göttingen and Copenhagen. The director of the Museum of Natural History of the Netherlands, C.J. Temminck, always trying to enrich his famous creation, also asked me to make fish collections for the establishment under his care. He ignored the fact that five years earlier I already proposed it to them, even before they asked me. Explaining this, I declared at the same time that my good feelings for the Rijksmuseum had not changed. The set-back in 1845 would defend me, it is true, to retract my proposition, but I wrote that I would voluntarily contribute to the enrichment of the Leiden collections, if he could persuade the Dutch government to take the initiative.

And this is what happened; Thorbecke, then Prime Minister, decided, on the advice of Temminck, to give the Governor General, Mr Duymaer van Twist the following instructions before his leave to the Netherlands Indies: the colonial government would retract the decision taken with regard to my offer in 1845; he would invite me to make the desired collections for the Rijksmuseum and he would let me know that, as a compensation, I could count on his material support for the publication of my intended Atlas. The case was arranged on this basis in 1853. Soon after this I started to send shipments to the National Museum in Leiden, to which I successively sent more then 16.000 specimens of fish from the Indian archipelago; — but new difficulties arose with regard to the publication of the Atlas.

Lithography in the Netherlands Indies was still in its infancy. Chromolithography was out of the question. Since 1845, the progress with regard to lithographic art had been slow and of little importance. Moreover, it was absolutely impossible to have prepared and published here a work of the kind and the extent of the Atlas, an extent then already estimated at more than the double of the former evaluation. And, if one would succeed in publishing the plates at regular intervals, one could anticipate the execution would stay too much below the requirements of science.

Therefore it would be better to decide to postpone the publication until my return in Europe, but I still lacked six years of service before I could definitely leave the colonies without sacrificing my pension. And although this time could

be used for a further increase of my material, it seems to me too long, also because my health had suffered a lot from serious and often repeated diseases. As the government had shown to be so much in favour of my project I believed they would not refuse to agree with an extraordinary leave to Europe, seen the impossibility of a worthy publication of the Atlas in the Indies. But in this I was mistaken and the request that I presented with the object of getting a leave without it having an effect on my future rights, did not meet with success. I must admit that being a military doctor, the government had a right of my service as such; my position of naturalists or geologists was not an official one; and the regulations maybe did not allow that they paid a higher officer, a rank I had reached by then, for purely scientific journeys, which had nothing to do with this military service.

Therefore it was only at the end of 1860 that I could leave the Indies, and finally start with the publications of a work that was prepared during a period of more than 17 years, if I also include the year 1861, which was for a greater part used to visit the main museums of Europe.

The publication of the first volumes turned out to be nothing less than trammels. The first 20 instalments were published rather regularly, but not without difficulties. I had found an editor in Mr Frederic Muller, Amsterdam, but this editor had nothing to do but receiving the already complete instalments, to distribute them amongst the subscribers and to collect the money. The pages with text and the plates were sent to me directly from the printing office. I myself did the checking and I also had to manage the packing and the shipping to the editor. The correction and the checking of the plates caused a lot of disagreement, both as a result of the negligence of the engravers as well as the lack of care of the lithographic establishment: I succeeded only with much difficulty to have the plates produced in a state in which they could be presentable to the subscribers.

The funding that was awarded by the government to meet the costs of publication was exhausted after the 20th instalment. These funds had been based on an evaluation of the extent of the work made in 1853, but the number of species from the Netherlands East Indies in my collections had increased considerably since that date. This made it necessary to enlarge the limits of the Atlas considerably.

When I left Java, I had a list of more than 80 subscribers in the Indies, and I had hoped to see this figure doubled after my arrival in Europe. But the publication of the first volumes was only hardly completed, when it became clear that the subscriptions from the Indies would only cover a small part of the publication costs. In the beginning the colonial government had facilitated the shipments to the Indies and assisted in the expedition and transmission of the contributions of the subscribers. But the new head of the government believed he should refrain from any cooperation with regard to this project, which meant the destruction of all subscriptions.

In view of the politic and social state of the Indies in this period, the editor did not dare to charge himself with the expedition of the instalments to the Indies and with the collection of the money, both for the work and for himself. The shipments to the Indies were therefore suspended, and as a consequence there were no receipts from that side. The extra-insular subscriptions also remained below the expectations and did not even reach the number of seventy. Moreover, 30 percent of the income had to be surrendered to the editor. The earnings of the work thus were reduced to a very modest sum, which permitted by no means to do without a gratification as agreed to up till now.

I therefore exposed the financial state of the work to the minister of Colonies (J. D. Fransen van de Putte), with the proposition to allocate a new grant for ten instalments. The minister, however, made objections. The public servants of the financial department of the foreign possessions, who formerly were under the care of the colonial government, had come under the control of the States General, and the minister of Colonies was no longer free to dispose of funds from the treasury without approval of the national representatives. Well then, the Minister Fransen van de Putte refused to request a new grant from the Chambers, believing that the representatives would not be willing to agree and would believe that the finances of the State had already been burdened enough with the first gratification.

The inevitable sequel to this refusal was a temporary suspension of the publication. Confined to my own means, I could only proceed very slowly.

But still new difficulties with regard to the execution of the plates would arise. The lithographer who had printed the first twenty instalments had sold his business, so I had to find another one. I believed to have succeeded in doing so when I made a contract with the director of the Royal Netherlands Lithographer in the Hague, but I was soon disappointed. The proofs of the plates delivered by this establishment were so mediocre that I was obliged to reject several, and I only managed to have published the 21st instalment after two years of quarrelling and waiting. I was not much happier concerning the plates of the 22nd instalment, for the execution of which I had made a contract with a renowned establishment in Haarlem. I did not have much to complain with regard to the lithographic work, but I did not succeed in extending the contract for the next instalments, because the required conditions were much too difficult to comply with. I then turned to one of the best establishments in Leiden. The plates of four instalments would come from this workshop, but not without four years of difficulties to get the proofs, difficulties that ended by necessarily having recourse to another producer.

I found my fifth lithographer in Amsterdam but I had fallen from Scylla into Charibdis, and I had to content myself with pulling from this source five plates for the 27th instalment. Although recommended to me by my editor, this establishment was not all organised for the execution of a work of the kind of the Atlas Ichthyologique.

Therefore, I came to a 6th lithographic establishment, Emmerik & Binger in Haarlem. Part of the plates of the 27th instalments and that of the following instalments are the work of the artists in Haarlem, and, taking into account the scantiness of the resources available for the publication of the Atlas, I can, generally speaking, only be content with the execution of the majority of the plates.

I must note here that the difficulties encountered with regard to the faultless and regular execution of the plates were basically not caused by ill will or indifference of the chiefs of the lithographic establishments, but by the limited means that I had at my disposal that did not permit to increase the expenditure of the work. Moreover, in the course of the publication, the successive contracts became more and more oppressing without resulting in a much better execution.

The retirement of the above-mentioned Minister, gave me hope that I could find amongst his successors a better disposition towards my work, and in that opinion I fortunately was not mistaken. The Minister of colonies, Hasselman, didn't hesitate to put a new grant on his budget and the National representatives did not have any objections. I therefore could re-start the work the financial position of which was from then assured for the 30 instalments that according to the original prospectus would comprise the total Atlas.

But now I suspected the estimate of the prospectus to be too low, and I believed that for the completion of the work at least 12 more instalments were necessary. New drawings, often based on specimens of a much larger size, required a much higher number of plates and then had been supposed on the basis of previous drawings that were rejected. For many species moreover, it seemed desirable to include figures of specimens of different ages.

In 1875, before the publication of the 30th instalment, I believed I should expose the state of affairs to the colonial government. Baron van Goldstein, the then Minister, did not hesitate to declare that the Atlas was already in a too advanced stage to leave it unfinished. He reserved in his budget the amount of money judged necessary to cover the costs of the later instalments, of which the number was evaluated to be about 15. The Chambers did not see any obstacle for disagreeing and I could continue with the publication of the work.

For those who know, or will become known with, the Atlas Ichthyologique, it is not redundant to know that the text in general, contains only very detailed diagnostic descriptions, diagnostic summaries of the species and the genera, short remarks that elucidate the descriptions, and reviews of the geographical distribution. The original plan was much more extended and resembled the one I have used in the two volumes published in Batavia, entitled "Ichthyologia Indiae archipelagicae Prodromus", which deal with the Silurids and Cyprinids. But if I had wished to apply this plan consistently to the Atlas, the work would have taken proportions incompatible with the resources that I could dispose of.

I believe it is important that it must not be ignored that this is the work of an amateur and not of a professional naturalist; that it was conceived by a young military doctor, without rank or fortune, but charged with a task that left only little spare time for zoological research. I would also like to add that the author is not only responsible for the work itself, but also for the material it was based upon; that he started his task without the library or a public Museum to help him with his investigations; that he had to form his own ichthyological library and a museum at his own home, and that for this reasons he was in a very disadvantageous position compared to naturalists who can dispose of immense resources like the great scientific centres of the civilised world. Finally, I would like it to be known that during the 18 years I spent in the Indies, I have continuously struggled with the consequences of the maintenance of a collection that was often partly dried out and of which the intoxicating effect manifested itself at least two or three times a year by typhoid and putrid fevers, that interrupted, sometimes for weeks, all scientific work. Moreover.....

Here ends the handwriting, which for the sake of completeness, has been printed as far as it goes.

H [ubrecht]

The original manuscripts of the Levensbericht (Biography) and the "Notice" could not be found in the Bleeker archives of the Nationaal Natuurhistorisch Museum in Leiden.

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