

Mauled by a rhinoceros: the final years of Alfred Duvaucel (1793-1824) in India

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COUVERTURE / *COVER*:

Detail of *Siccra Gulley on the Ganges*, aquatint by Thomas Daniell (1749-1840), and Mounted specimen of a two-horned Sumatran rhinoceros (*Dicerorhinus sumatrensis* (Fischer, 1814)), photographed in the stores of the Musée zoologique in Strasbourg (no. Mam-01505) by Marie Meister in July 2018.

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Mauled by a rhinoceros: the final years of Alfred Duvaucel (1793-1824) in India

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ABSTRACT

Alfred Duvaucel, stepson of Georges Cuvier, collected animals for the Muséum d'Histoire naturelle de Paris, France, during visits to India and South-East Asia from 1817 to 1824. In early 1823, he set out from Chandernagor traveling upstream on the Ganges, intending to reach Nepal or Tibet. During a short stop near Sakrigali in the Rajmahal Hills of Bihar, he was attacked by a rhinoceros and badly hurt on 24 January 1823. After receiving medical treatment in Bhagalpur, he reconsidered his plans and returned to Calcutta. He succumbed to his wounds aggravated by attacks of dysentery on his homeward journey, in Madras in August 1824. His letters written in the Rajmahal Hills were published by Jean-Jacques Coulmann in 1862. The zoological material collected was reviewed by his uncle Frédéric Cuvier, who inserted many details in the *Histoire naturelle des mammifères*, to which he added biographical notices. The presence of rhinoceros in the Rajmahal Hills (until about 1850) is often recorded, but the specific identity of these animals is uncertain in the absence of any surviving specimens. A mounted rhinoceros in the Zoological Museum of Strasbourg was said to be the one which killed Duvaucel, but as it is a two-horned Sumatran rhinoceros, unknown anywhere near Bihar, this needs further investigation.

KEY WORDS

Exploration,
animal encounter,
Duvaucel,
Cuvier,
Muséum national
d'Histoire naturelle.

RÉSUMÉ

Victime d'un rhinocéros: les dernières années d'Alfred Duvaucel (1793-1824) en Inde.

Lors de ses visites en Inde et en Asie du Sud-Est de 1817 à 1824, Alfred Duvaucel, beau-fils de Georges Cuvier, collecta des animaux pour le Muséum d'Histoire naturelle de Paris, en France. Au début de l'année 1823, il partit de Chandernagor pour remonter le Gange, ayant l'intention d'atteindre le Népal ou le Tibet. Lors d'un bref arrêt près de Sakrigali, dans les collines de Rajmahal, dans le Bihar, il fut attaqué par un rhinocéros et grièvement blessé le 24 janvier 1823. Après avoir été soigné à Bhagalpur, il renonça à ses projets et retourna à Calcutta. Il succomba à ses blessures, aggravées par des accès de dysenterie, lors de son voyage de retour à Madras en août 1824. Ses lettres, écrites dans les collines de Rajmahal, furent publiées par Jean-Jacques Coulmann en 1862. Les documents zoologiques rassemblés furent examinés par son oncle Frédéric Cuvier, qui inséra de nombreux détails ainsi que des notices biographiques dans son *Histoire naturelle des mammifères*. La présence de rhinocéros dans les collines de Rajmahal est souvent signalée jusqu'aux environs de 1850, cependant l'identité spécifique de ces animaux est incertaine en l'absence de spécimens survivants. Le rhinocéros exposé au Muséum zoologique de Strasbourg serait celui ayant tué Duvaucel, mais comme il s'agit d'un rhinocéros de Sumatra à deux cornes, inconnu dans la région du Bihar, une enquête plus approfondie est nécessaire.

MOTS CLÉS
Exploration,
rencontre animale,
Duvaucel,
Cuvier,
Muséum national
d'Histoire naturelle.

INTRODUCTION

Alfred Duvaucel (1793-1824) was the stepson of the famous zoologist Georges Cuvier (1769-1832). He was born on 4 February 1793 in Bièvres (Seine-et-Oise, presently in Essonne department), just outside Paris, the second son of Louis Philippe Alexandre Du Vaucel, Marquis de Castelnau (1749-1794) and Anne Marie Sophie Coquet du Trazail (1764-1849) (Roger Bour pers. comm.). His father was a nobleman, engaged as “fermier général” (General Farmer) to collect revenues on behalf of the King, who was guillotined during the terror of the French Revolution on 8 May 1794. His mother had been born on 12 April 1764 in Valence (Isère). Alfred had one sister and two brothers: Thélème (1788-1809), Antoinette Sophie Laure (1789-1867) and Martial (1794-1871). Some years after the execution of his father, his mother remarried on 2 February 1804 to Georges Cuvier, who adopted all children into the family (Oustalet 1895). It is undeniable that Cuvier installed a love for natural history in all four of his stepchildren, Sophie helping him on many occasions during his lifetime, and Alfred setting out to distant lands to look for unknown kinds of animals. There are no known portraits of Alfred Duvaucel.

After a short military career, Alfred Duvaucel became in 1817 one of the King's Naturalists sent out across the world to collect specimens for the Muséum d'Histoire naturelle in Paris, where his stepfather was Chair of Animal Anatomy. He first went to India, where he took up residence in the French factory of Chandernagor near Calcutta (Kolkata). He had met a fellow Frenchman Pierre-Médard Diard (1794-1863) and together they collected large numbers of animals obtained by sending out hunters, buying what they found in the market, trade with local dignitaries and some personal hunting. It appears that they did not go for long excursions inland.

At the end of 1818, they met Thomas Stamford Raffles (1781-1826), who enticed the two men to travel to the Malay Peninsula, Singapore and Sumatra in his employ to study the natural history of the region. This collaboration ended after two years, when Diard decided to travel to Java, while Duvaucel made his way to Padang on Sumatra's East coast, before returning to Chandernagor. Here he went on a excursion to Sylhet (July-December 1821), but he was disappointed with the opportunities to collect new animals.

His biography so far is well-known through a number of publications appearing during his lifetime, which were recently edited and annotated by Petit (2015). The main sources include letters and notices received directly from Duvaucel and published by Georges Cuvier (1821; cf. Anonymous 1824a), by his uncle Frédéric Cuvier (1824; cf. Anonymous 1824b) and posthumously under his own name (Duvaucel 1824, 1833a, b).

Studying these contemporary accounts, it becomes clear that there is very little detail about his life and travels after returning from Sylhet to Calcutta in December 1821. It is generally stated that he intended to travel to Nepal or to Tibet, spending time in Patna, Gorakhpur and Kathmandu (Anonymous 1825a), and that he died soon after in Madras (Chennai) on his homeward journey. Localities mentioned in the text are shown on Figure 1.

Although details are still elusive, it is possible to reconstruct generally what happened to him during the last two years of his life. This information is found in a retrospective biography written by his friend J.-J. Coulmann (1862), as well as in the remarks published by Frédéric Cuvier (1773-1838) in his series of papers on new mammals, edited together with Étienne Geoffroy-Saint Hilaire (1772-1844), with collective title *Histoire naturelle des mammifères* (Cuvier & Geoffroy Saint-Hilaire 1819-1842). It appears that Duvaucel indeed started out on this journey to the north, travelled up the Ganges, but after only a few weeks, while spending some

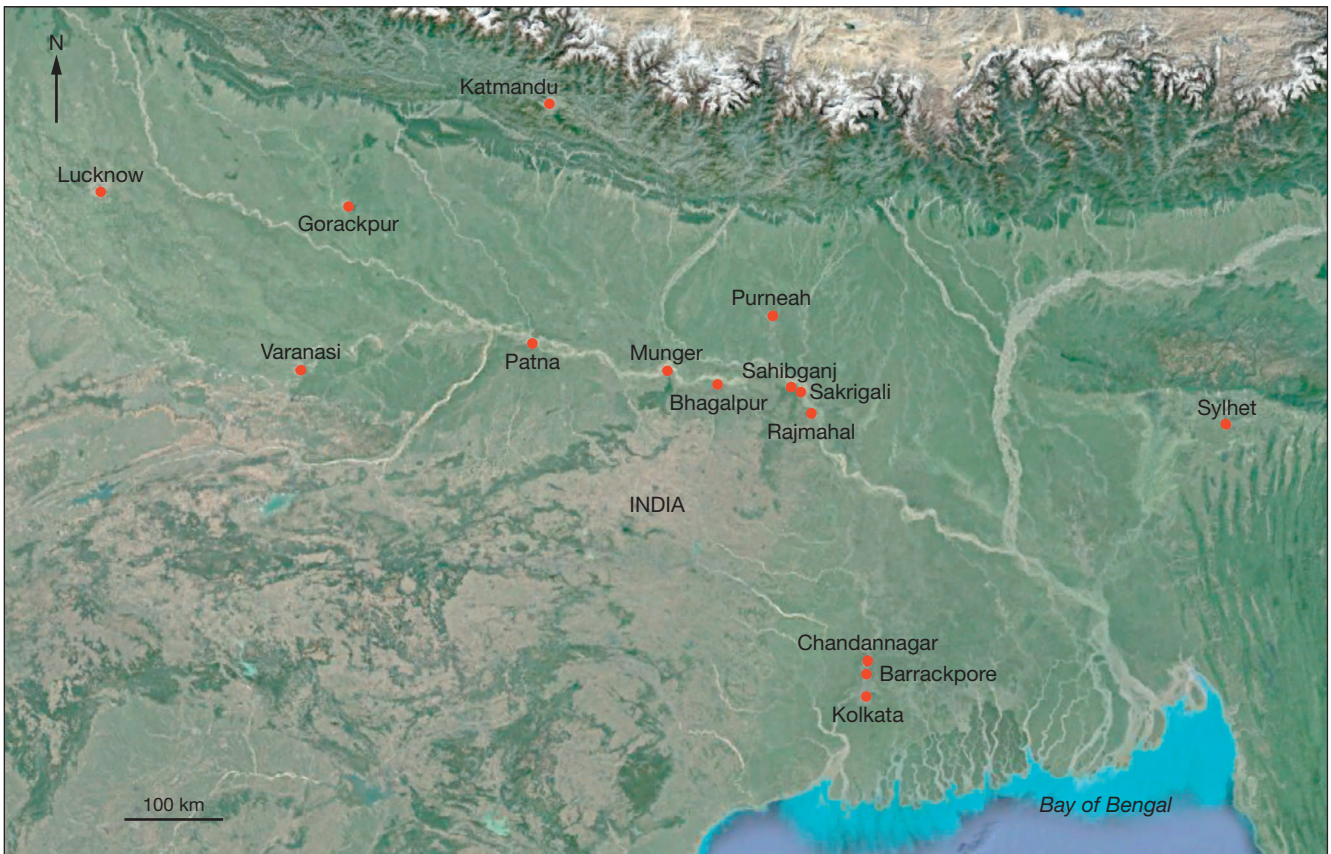


Fig. 1. — Simplified map of northern India showing localities mentioned in the text. Thanks to Roger Bour, Paris.

time in the Rajmahal Hills east of Patna, he was attacked by a rhinoceros. He was badly hurt and never recovered from his injuries despite medical help provided first in Bhagalpur, then in Calcutta and finally in Madras. It is the purpose of this paper to add to our knowledge of these final years of Duvaucel's life, as well as to provide information on the rhinoceros that killed him, and on his notices sent back to Paris to increase knowledge about the wildlife of India.

LETTERS REPRODUCED BY J.-J. COULMANN

Jean-Jacques Coulmann (1796-1870), advocate and politician, had known Alfred Duvaucel when both were young, as they were distantly related. His elder sister was married to General Frédéric Louis Henri Walther (1761-1813), Cuvier's first cousin. In his *Réminiscences* (Coulmann 1862), he devoted a chapter to the memory of his childhood friend, providing the text of nine letters written by Alfred to himself in 1817 and to his mother in 1818 and 1823, dated as follows:

- Honfleur, 18 November 1817;
- Calcutta, 30 May 1818;
- Sielygalli, près Bajemel, 24 January 1823;
- Sielygalli, près Bajemel, continuation on 24 January 1823;
- Sielygalli, près Bajemel, 25 January 1823;
- Sielygalli, près Bajemel, 27 January 1823;

- Boglipour, 28 January 1823;
- [Boglipour], 31 January 1823;
- [Boglipour], 4 February 1823.

The letters of 1823 are certainly graphically explicit enough to tell the homefront what was happening to him. Written in quick succession, Duvaucel was naturally aware that they might reach Paris in a bundle, after a lapse of several months, or not at all.

On the evening of Friday 24 January 1823, from a place called Sielygalli, close to Bajemel (Rajemel, currently Rajmahal), he apologized to his mother for interrupting his correspondence earlier that day, because one of his hunters had wounded a rhinoceros with an arrow in its eye. He immediately set off accompanied by the servant and seven or eight men armed with bows and daggers to find the animal. When he was just 10 steps away, certain to get another good specimen for the Muséum, he was surprised by a second rhinoceros which he had not noticed. With a single blow of its head the animal threw him 10 steps away, then attacked again and with its horn damaged his right thigh before running away. Duvaucel stood up and shot at the animal, but its fate is not recorded. The wound caused him to lose a lot of blood and after 20 minutes he felt unable to walk. His men transported him on an oxcart to the banks of the Ganges, three miles away, where Duvaucel wrote his letter telling his mother not to worry as the wound was superficial and would heal in a few weeks. In French this incident was described as follows:

“J’avais consacré cette journée à vous écrire, mais à peine avais-je commencé, qu’on est venu m’interrompre en m’annonçant la présence d’un rhinocéros dans mon voisinage. Il ne fallait pas moins pour me déranger. C’était le seul animal qui me retînt ici. Je tenais beaucoup à en offrir une paire au Muséum, et je vous quittai, comptant sur une victoire d’autant plus facile que j’avais acquis quelque expérience depuis la première. L’animal venait d’ailleurs d’être éborgné par un de mes chasseurs qui lui avait lancé une flèche dans l’œil. J’arrive près de lui en peu d’instant accompagné d’un seul domestique et de sept ou huit parias armés d’arcs et de piques. Je pénétre fort avant dans les broussailles et je n’en étais plus qu’à dix pas, certain de l’abattre, et tout aussi certain d’avoir ses os et sa peau, quand je suis tout à coup surpris par un autre rhinocéros que je n’avais pas aperçu. Il était plus près que le premier et se précipita sur moi avec une telle furie que je n’eus pas le temps de diriger vers lui mes armes engagées dans le buisson. D’un seul coup de muffle il me jeta à dix pas, puis d’un coup de corne il me fit une large blessure tout le long de la cuisse droite, et se mit aussitôt à fuir, en me laissant aussi effrayé de son apparition qu’étonné d’être encore en vie. La douleur fut même si peu vive que je me relevai aussitôt et que, saisissant mon fusil, j’eus l’imprudence de tirer sur mon généreux vainqueur, à qui je fis plus de mal qu’il ne m’en avait causé. Mais au bout de vingt minutes j’avais perdu tant de sang, et j’éprouvais un tel engourdissement qu’il me fut impossible de marcher. Les parias me transportèrent à la caverne, puis de là aux bords du Gange, à trois miles de distance, sur un chariot traîné par deux bœufs. Après trois heures de marche, j’arrive enfin à mon bazar, d’où je vous écris ces mots pendant qu’on prépare tout ce qu’il faut pour me panser. Ma blessure est plus large que profonde, elle guérira en quelques semaines. C’est parce qu’il n’y a pas le moindre danger que je me console en vous faisant le récit de ce petit accident.” (Coulmann 1862: 150)

During the night he was very sick, vomiting blood and unable to breathe. The only option was to try to get to the English station further up the river (letter of 25 January 1823). In his next letter dated 27th, he knew that his wound had become worse, even though his leg was not broken and no muscle had been affected. He apologised to Cuvier that his collecting activity was less than expected, but he hoped to spend some time at Benares with one of his friends to learn Hindustani.

On 28 January 1823 he had at last arrived in Boglipour (Bhagalpur) where he had found an excellent doctor who assured him that all pain would be gone in 10 days and that he would be able to shoot another rhinoceros in a month time. He had, rather inappropriately, also told him that a rhinoceros was as easily killed as a partridge. His treatment continued on the 31st, his Scottish doctor assuring him that the British offered the best medicine. Bedridden, unable to pursue the rhinoceros, he was able to get his servants to shoot crocodiles of which he was forwarding one to Cuvier.

The last letter printed by Coulmann (1862) was written at Bhagalpur on 4 February 1823. Duvaucel was slowly getting better, but he was unhappy because the doctor would not allow him any exercise. It was also getting too late in the

year to think of undertaking his journey northwards, so he just hoped he would be able to recover in Benares very soon.

When his letters reached Paris, his family must have been worried, but at the same time unable to provide any assistance. The story was clear enough, the letters showed where he wrote them, but of course these localities were confusing for anybody unfamiliar with Indian orthography. However, Duvaucel’s “Sielygalli” is clearly Sicrigully, Sikrigali, currently often spelled Sakrigali (25°25’N, 87°13’E) on the south bank of the Ganges just east of Sahibganj (Fig. 2). Duvaucel’s “Bouglipour” or Bhaughulpore, is now Bhagalpur, about 50 km further up the Ganges, then about a five days journey from Patna. Duvaucel did not identify the Scottish surgeon in Bhagalpur. I am unable to choose from at least three candidates: a long-term resident John Glas (1750-1822), G. M. Kennedy, assistant-surgeon in 1822, or J. M. Macra, surgeon in 1823 (Basu 1939).

THE RHINOCEROS OF RAJMAHAL

Duvaucel did not express any surprise to encounter a rhinoceros in Sakrigali. In fact, until at least the middle of the 19th century, the Rajmahal Hills were renowned as hunting grounds, and the rhinoceros is regularly listed among the fauna. For instance, the Governor-General Lord Francis Edward Rawdon-Hastings (1754-1826) came to the region in 1819 and is said to have killed three rhinoceros (Mundy 1833: 181). The artist William Daniell (1769-1837) found tracks in the eastern part of the hills in 1788 (Rookmaaker 1999). The area was largely uninhabited and provided an ideal habitat for the animals.

Duvaucel was in fact not the first to be attacked by a rhinoceros in the Rajmahal Hills. In 1787, Dirk van Hogendorp (1761-1822), Director of the Dutch factory in Patna, heard during a short stay in Monghir (Munger) that the region was terrorized by an angry rhinoceros which attacked and destroyed everything he could. He had not gone far on his journey out of town when he met the Maharajah of Patna (Ramchandra Singh Deo) traveling on elephants in an opposite direction. He was told afterwards that just minutes after he had left, the Maharajah was attacked by a rhinoceros, saved himself by jumping on the ground, but his elephant fought a terrible battle and was left for dead (Van Hogendorp 1887: 66).

Although the rhinoceros may not have been rare in the region, there is no record that any specimen has ever been preserved or taken alive. There are also no drawing, photograph, detail of size or anything which could help to decide which species would have been found there. An authority like Jerdon (1874) stated that it was the Javan or lesser one-horned rhinoceros (*Rhinoceros sondaicus* Desmarest, 1822), best known in India from the Sunbarbans south of Calcutta. However, there were others like Blanford (1891) who maintained that it was the greater one-horned rhinoceros (*Rhinoceros unicornis* Linnaeus, 1758). Although personally I agree with the latter view because in the Purneah District of Bihar, just north of the Rajmahal Hills across the Ganges, only *R. unicornis* has been shot, it is certainly true that the evidence is scant.



FIG. 2. — As there is no known portrait of Alfred Duvaucel, this is a depiction of the general region where he was attacked by a rhinoceros in January 1823: *Siccra Gulley on the Ganges*, aquatint by Thomas Daniell (1749-1840) and published in his *Oriental Scenery* (Daniell & Daniell 1804).

As Duvaucel's accident represents one of the very few cases where we know for certain that a rhinoceros was seen by a naturalist, this tragic episode might help in establishing the specific identity of the animals. Although it is not clear from Duvaucel's letters of 1823 if any rhinoceros was in fact killed and preserved, it is not impossible that a specimen reached Paris. There are two references which may shed light on this. Duvernoy (1854: 39) has a list of skeletons of different rhinoceros species examined in the Museum in Paris including three *Rhinoceros sumatrensis* Fischer, 1814 sent by Duvaucel, two *Rhinoceros javanus* G. Cuvier, 1829 sent by Diard, and one young *Rhinoceros indicus* G. Cuvier, 1817 sent by Duvaucel. While the specimens of *R. sumatrensis* and *R. javanus* are probably Indonesian in origin, the young *R. indicus* (= *unicornis*) must be Indian, but unfortunately there is too little detail about to link it with the events in the Rajmahal Hills. It was exhibited in the Muséum in 1828 (Anonymous 1828: 31). No *R. unicornis* skeleton is currently associated with Duvaucel in the online collections database of the Muséum national d'Histoire naturelle (MNHN 2019).

The second possibility is found in a footnote to Duvaucel's incident in Coulmann (1862: 143), stating that the animal still existed "monté au Muséum de Strasbourg". Georges Louis Du-

vernoy (1777-1855), the first Director of the Musée d'Histoire naturelle in Strasbourg, received a gift from the Paris Museum in 1829 which included the skin of a two-horned rhinoceros of Sumatra. It was rare and historically significant: this animal had been killed by Mr Duvaucel, the intrepid collector, who died from the complications of a wound inflicted during the chase (Lereboullet 1837: 149; Wandhammer 2008: 44). Dominique Auguste Lereboullet (1804-1865), the second Director of the collection from 1837-1865, gave this rhinoceros pride of place (Lereboullet 1851: 24). Although no longer in perfect condition, this mounted hide is still kept in the stores of the Museum in Strasbourg, standing on a pedestal, but without label or associated history attached (no. Mam-01505; information from Marie Meister & M. D. Wandhammer of the Musée zoologique in Strasbourg, June 2017). A photograph (Fig. 3) recently taken of this specimen shows that it is definitely a Sumatran rhinoceros (*Dicerorhinus sumatrensis* (Fischer, 1814)).

Unfortunately, establishing the identity of the rhinoceros in Strasbourg appears not to help to resolve the issue about the species which once occurred in Rajmahal. While there will always remain an element of doubt as well as the possibility of misreading the historical records, in my view it is very unlikely that the rhinoceros of Rajmahal was two-horned. It just doesn't fit

TABLE 1. — Entries in Cuvier & Geoffroy Saint-Hilaire, *Histoire naturelle des mammifères* (1819-1842) containing information about zoological material from South Asia sent to Paris by Alfred Duvaucel.

| Part | Date (Year-Month) | Mammal species as in original | Locality |
|--------|-------------------|---|---|
| 06 | 1819.V | Bouc de Cachemire <i>Capra hircus</i> var. <i>lanigera</i> (C.H. Smith, 1821) | Barrackpore |
| 34 | 1821.XI | Poucan – <i>Stenops tardigradus</i> Linnaeus, 1758 | Bengal |
| 36 | 1821.I | Ouanderou – <i>Macacus silenus</i> Linnaeus, 1758 | Barrackpore |
| 38 | 1822.XII | Kiodote – <i>Macroglossus minimus</i> Geoffroy, 1810 | Bengal |
| 39 | 1823.III | Ours Jongleur – <i>Ursus labiatus</i> Blainville, 1817 | India |
| 39 | 1823.IV | Cerf de Wallich – <i>Cervus Wallichii</i> Cuvier, 1823 | Barrackpore (Nepal) |
| 40 | 1823.IV | Dzigetai – <i>Equus hemionus</i> Pallas, 1775 | Domesticated in Lucknow |
| 40 | 1823.IV | Macaque de l'Inde – <i>Macacus maurus</i> Schinz, 1825 | India |
| 41 | 1824.V | Bouquetin du Nepoul – <i>Capra nubiana</i> Cuvier, 1825 | Nepal |
| 41 | 1824.V | Ours du Thibet – <i>Ursus thibetanus</i> Cuvier, 1823 | Sylhet and Nepal |
| 42, 43 | 1824.VIII | Cerf cochon – <i>Cervus porcinus</i> Zimmermann, 1777 | Barrackpore |
| 43 | 1824.VIII | Antilope – <i>Antilope cervicapra</i> (Linnaeus, 1758) | India |
| 44 | 1824.IX | Benturong – <i>Ictides albifrons</i> Cuvier, 1822 | Bhutan |
| 44 | 1824.IX | Tchicara – <i>Antilope chycarra</i> F. Cuvier, 1842 | Alive, owned by Duvaucel (in Chandernagor?) |
| 45 | 1824.XI | Cerf noir du Bengale – <i>Cervus hippelaphus</i> Erxleben, 1777 | Barrackpore |
| 46 | 1824.VI | Jungly-Gau – <i>Antilope picta</i> Pallas, 1777 | India |
| 47 | 1825.II | Entelle vieux – <i>Semnopithecus entellus</i> (Dufresne, 1797) | India |
| 47 | 1825.II | Macaque à face rouge – <i>Macacus speciosus</i> F. Cuvier, 1825 | India |
| 50 | 1825.VI | Panda – <i>Ailurus refulgens</i> F. Cuvier, 1825 | India |
| 51 | 1825.IX | Bali Saur – <i>Arctonyx collaris</i> F. Cuvier, 1842 | Barrackpore (Bhutan) |
| 54 | 1826.IX | Chat de Nepau – <i>Felis torquata</i> Geoffroy Saint-Hilaire & Cuvier, 1826 | Nepal |
| 55 | 1826. IX | Chat aux oreilles rouges – <i>Felis caligata</i> Temminck, 1824 | India |
| 69 | 1837.IV | Lièvre à cou noir – <i>Lepus nigricollis</i> Cuvier, 1823 | Bengal and Java |
| 72 | 1842.VIII | Hemione ou Dziggetai (2) – <i>Equus hemionus</i> Pallas, 1775 | Domesticated in Lucknow |

everything else that we know about the ranges of these animals in South Asia (Rookmaaker 1984). I suppose that there must have been some mix-up in the transfer of information from Paris to Strasbourg. Hence the possibility remains that the animal that killed Duvaucel is in fact still in another collection in France.

ENTRIES IN THE *HISTOIRE NATURELLE DES MAMMIFÈRES*

Among the written descriptions, drawings and specimens which Duvaucel sent home to Paris, there were many details about species hitherto not or poorly known, especially among the mammals. This new material was used extensively by his uncle Frédéric Cuvier in the *Histoire naturelle des mammifères*, which was published in a series of 72 parts, each separately numbered and dated, from 1819 to 1842 (Cuvier & Geoffroy Saint-Hilaire 1818-1842). Each of the 431 species was illustrated on a coloured plate accompanied by a text of usually just a few pages.

There are 50 instances in this work where the information was supplied by Duvaucel. Half of these pertained to collections made in South-East Asia, often accredited both to Duvaucel and his friend Diard (Table 1). The remaining 25 species were largely based on the material obtained by Duvaucel during his two stays in India, in 1818 and 1821-1824. The localities where these animals were found are rarely too precise, but it certainly seems that Duvaucel took advantage of his contacts in and near Calcutta. There are at least six specimens seen in the Governor's menagerie in Barrackpore, another handful brought from Nepal by Nathaniel Wallich (1786-1854), and just one with locality "Silhet".

Besides the zoological details, F. Cuvier also inserted a few notes of a more personal nature in the narrative, which shed some light on the activities and travels of Duvaucel in the region. In the description of the "Jongleur" (*Ursus labiatus* Blainville, 1817) dated March 1823, F. Cuvier mentions that following the discoveries in Bengal, Sumatra and Sylhet, Duvaucel is preparing for a new journey across the Himalayas into Tibet. It is likely that Duvaucel had written about his plans in letters to the family at the end of 1822. Despite these intentions, there is no record in F. Cuvier's work that any new species were collected, which is consistent with the likelihood that Duvaucel never proceeded beyond Bhagalpur or Patna.

In the description of the Croo gibbon (*Semnopithecus comatus* Desmarest, 1822) dated March 1825, F. Cuvier shared the family's grief of the loss of their adventurous traveller. He said, in summary, that Duvaucel had been ready to return to the love of the family, when instead the news arrived of his death. His body had been unable to cope with the combined influence of the tropical climate and the serious injuries inflicted by a rhinoceros which had hit him in the stomach and cut into his thigh. Having lost much blood and much weakened by his wounds, Duvaucel had been unable to fight the most cruel disease of that climate, the dysentery.

Here we find important confirmation that the family was informed about what happened. However, there is no word about where the attack took place, nor about Duvaucel's whereabouts between the accident with the rhinoceros and his last breath in Madras. Apparently, the family had hoped to receive Duvaucel's possessions, including scientific notes, which he probably would have carried with him on the last leg of his journey from Calcutta to Madras. But they never came, and in the description of the Pithéchéir Mélanure



FIG. 3. — Mounted specimen of a two-horned Sumatran rhinoceros (*Dicerorhinus sumatrensis* (Fischer, 1814)), photographed in the stores of the Musée zoologique in Strasbourg (no. Mam-01505) by Marie Meister in July 2018. It was said to be connected with Alfred Duvaucel when it was transferred from Paris in 1829, but as this species of rhinoceros is unknown in the vicinity, it is unlikely to be the animal that was responsible for Duvaucel's injury in the Rajmahal Hills of Bihar, India.

(*Pitecheir melanurus* F. Cuvier, 1833) dated February 1833, F. Cuvier lamented that after waiting for ten years since Duvaucel's death in Madras (no date), he had given up hope and decided to publish some final results without the benefit of the direct observations which had accompanied earlier shipments (cf. Oustalet 1895).

DUVAUCEL'S JOURNEY TO RAJMAHAL AND ITS AFTERMATH

There is very little detail about Duvaucel's whereabouts and activities after his encounter with the rhinoceros near Sakrigali in the Rajmahal Hills of Bihar on 24 January 1823. Records of the Muséum d'Histoire naturelle of Paris show that

Duvaucel's last shipments were sent on 12 November 1822 (including specimens from Calcutta), in March 1825 (specimens from Nepal and Bengal) and in 1826 (specimens without origin) (Cécile Callou pers. comm.). The letters transcribed by Coulmann (1862) leave him in the house of a surgeon in Bhagalpur in February 1823. There is no doubt that at the time Duvaucel was traveling up the Ganges by boat towards Patna (or, less likely, also Lucknow, to see the famous menagerie), with the intention to explore the Himalayan regions around Kathmandu, maybe even hoping to reach Tibet. I believe that the delay in recovering from the wounds caused a change of plan. Maybe he did reach Patna and stayed for a while, but he never went further north. It is far more likely that he returned to Chandernagor near Calcutta to find treatment and recuperate. When it was found after more than a year that

his health remained critical, he must have decided to return home (Anonymous 1825a). He reached Madras (Chennai) on the south-east coast of India, where for some reason he was taken ashore. The sad news of his death was conveyed in a short notice:

“Madras. Deaths. – About the latter end of August [1824], in the house of Herbert Compton, Esq., Advocate-General, Alfred Duvaucel, Esq., Naturaliste du Roi, deputed by the Institute of France as a Corresponding Memb. in the Div. of Natural History, Memb. of Asiatic Soc. of Calcutta” (Anonymous 1825b).

Sir Herbert Abingdon Draper Compton (1776-1846) was Advocate-General in Madras at the time and resided at “The Chandeleer” near the town. There are no further details about the exact date of death, or what happened afterwards with his remains and possessions.

Early sources about Duvaucel’s life generally include the incident with the rhinoceros as one of the causes of his decease (Cuvier & Geoffroy Saint-Hilaire 1819-1842 [1825]; Anonymous 1824c). But, maybe because this was not taken as the direct cause of his death, biographers forgot about it, as well as about the details of his travels at the time, resulting in an inaccurate impression that he succumbed to disease either in Sylhet or in Calcutta (Anonymous 1825b; Mahul 1825; Duvaucel 1833b: 603; Lacaze 1856; Petit 2015).

In March 1825, when the news of Duvaucel’s sad fate was still fresh, his uncle F. Cuvier ended his short obituary with these words, written in the flowery French of the time which is almost impossible to improve:

“Reçois, mon cher ami, du séjour que tu habites, et d’où tu vois peut-être l’affliction de ta famille, les larmes que ta perte lui fait répandre, reçois, dans cet ouvrage, qui t’appartient autant qu’à moi, ce premier témoignage de ma douleur. J’étais heureux de m’associer à tes succès, de proclamer ton nom, d’exalter ton mérite, de faire connaître à ton pays les richesses que tu lui procurais, d’appeler sur toi la reconnaissance publique, afin qu’à ton retour tu trouvasse le noble prix de tes peines, le seul dont ton cœur généreux pût être flatté: la juste et profonde estime de tous ceux que tu pouvais estimer toi-même.”

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REFERENCES

- ANONYMOUS 1824a. — Notice sur le voyage de M. Alfred Duvaucel, dans l’Inde (Premier article). *Journal asiatique* 4: 137-145 [edited version of Cuvier 1821].
- ANONYMOUS 1824b. — Notice sur le voyage de M. Alfred Duvaucel, dans l’Inde (Deuxième article). *Journal asiatique* 4: 200-213 [edited version of Cuvier 1824].
- ANONYMOUS 1824c. — Troisième notice sur les voyages de M. Alfred Duvaucel, dans l’Inde, ayant pour objet plus particulier, l’histoire naturelle. *Journal asiatique* 5: 277-285.
- ANONYMOUS 1825a. — Necrology no. IV. M. Du Vaucel. *Asiatic Journal and Monthly Register for British India and its Dependencies* 19: 662-663. [Translated in *Journal des débats politiques et littéraires*, 19 June 1825: 4, and *Algemeene Konst- en Letter-bode*, 1825 (26): 1-2].
- ANONYMOUS 1825b. — Notice of deaths in Madras. *Oriental Herald and Journal of General Literature* (5): 528.
- ANONYMOUS 1828. — *Guide des étrangers au Muséum d’Histoire naturelle et au Jardin du Roi*. F. G. Levrault, Paris, 137 p. <https://doi.org/10.5962/bhl.title.113919>
- BASU K. K. 1939. — The early Europeans in Bhagalpur. *Bengal Past and Present* 56: 81-97.
- BLANFORD W. T. 1891. — *The Fauna of British India, Including Ceylon and Burma: Mammalia*. Taylor and Francis, London, 617 p. <https://doi.org/10.5962/bhl.title.97003>
- COULMANN J.-J. 1862. — Alfred Duvaucel: ses adieux à l’auteur, son départ pour l’Inde, lettres qu’il écrit à M^{me} la baronne Cuvier, sa mère, ses aventures pendant cinq ans au Bengale, in COULMANN J.-J. (ed.), *Réminiscences. Volume 1: Chapitre 19*. Michel Lévy Frères, Paris: 143-157.
- CUVIER F. 1824. — Notice sur les voyages de M. Duvaucel. *Revue encyclopédique* 21: 257-267 [Reprinted in 1824 in *Le musée des variétés littéraires* 4 (24): 201-206].
- CUVIER F. & GEOFFROY SAINT-HILAIRE É. (éds) 1819-1842. — *Histoire naturelle des mammifères: avec des figures originales, coloriées, dessinées d’après des animaux vivans*. A. Belin, Paris, 4 vols [431 p.]. <https://doi.org/10.5962/bhl.title.78766>
- CUVIER G. 1821. — Notice sur les voyages de MM. Diard et Duvaucel, naturalistes français, dans les Indes orientales et dans les îles de la Sonde. *Revue encyclopédique* 10: 473-482. [Translated in German in *Neue Allgemeine Geographische Ephemeriden* 9 (4): 497-502 (1821)].
- DANIELL T. & DANIELL W. 1810. — *Oriental Scenery. Set Four: Twenty-four Landscapes*. Thomas Daniell & William Daniell, London: plate 9.
- DUVAUCEL A. 1824. — Voyage dans le Silhet, in EYRIES M. (éd.), *Abrégé des voyages modernes depuis 1780 jusqu’à nos jours*, Volume 14. Ledoux, Paris: 35-47.
- DUVAUCEL A. 1833a. — Lettres familières sur l’Inde: première partie. *Revue des deux mondes* 2 (10): 601-631. <https://www.jstor.org/stable/44688344>
- DUVAUCEL A. 1833b. — Lettres familières sur l’Inde: seconde partie. *Revue des deux mondes* 2 (11): 59-80.
- DUVERNOY G. L. 1854. — Nouvelles études sur les rhinocéros fossiles. *Archives du Muséum national d’Histoire naturelle* 7: 1-144.
- JERDON T. C. 1874. — *The mammals of India: a Natural History of all the Animals Known to Inhabit Continental India*. John Wheldon, London, 335 p. <https://doi.org/10.5962/bhl.title.20569>
- LACAZE A. DE 1856. — Duvaucel (Alfred), in HOFER J.-C.-F. (dir.), *Nouvelle biographie générale depuis les temps les plus reculés jusqu’à nos jours, avec les renseignements bibliographiques et l’indication des sources à consulter. Tome quinzième*. Firmin Didot Frères, Paris: cols 534-539.
- LEREBoullet A. 1837. — Notice sur le Musée d’Histoire naturelle de Strasbourg. I: Partie historique. *Revue d’Alsace* 2 (3): 131-165.
- LEREBoullet A. 1851. — *Notice sur le Musée d’Histoire naturelle de Strasbourg*. G. Silbermann, Strasbourg, 28 p.

- MAHUL A. 1825. — Duvaucel (Alfred), in MAHUL A. (ed.), *Annuaire nécrologique, ou Complément annuel et continuation de toutes les biographies, ou dictionnaires historiques [...] année 1824*. Baudouin Frères, Paris: 109-110.
- MNHN 2019. — *Mammals – Muséum national d’Histoire naturelle*. <https://www.mnhn.fr/en/collections/collection-groups/vertebrates/mammals>, last consultation: 27.V.2019.
- MUNDY G. C. 1833. — *Pen and Pencil Sketches, Being the Journal of a Tour in India, Vol. 2*. John Murray, London, 367 p.
- OUSTALET E. 1895. — Un type curieux de rongeur: le *Pitcheir melanurus*. *La nature: revue des sciences et de leurs applications aux arts et à l’industrie* 23: 135-138.
- PETTIT J. 2015. — *Alfred Duvaucel et Victor Jacquemont: impressions de voyages en Inde (1818-1832)*. Pocket, Paris, 409 p. (Coll. Agora; 385).
- ROOKMAAKER L. C. 1984. — The former distribution of the Indian rhinoceros (*Rhinoceros unicornis*) in India and Pakistan. *Journal of the Bombay Natural History Society* 80 (3): 555-563.
- ROOKMAAKER L. C. 1999. — William Daniell’s depictions of the rhinoceros in India. *Archives of Natural History* 26 (2): 205-210.
- VAN HOGENDORP D. C. A. 1887. — *Mémoires du Général Dirk van Hogendorp, Comte de l’Empire, etc.* Martinus Nijhoff, La Haye, 416 p.
- WANDHAMMER M. D. 2008. — *Histoires naturelles: les collections du Musée zoologique de la ville de Strasbourg*. Musées de Strasbourg, Strasbourg, 109 p.

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