

THE SCHLAGINTWEIT COLLECTIONS

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This article outlines the significance of some of the discoveries in natural science made in India and the Himalayas by the Schlagintweit brothers, who were eminent nineteenth century scientists and explorers employed by the East India Company to carry out survey work. The mainly natural history subject matter covers zoology, botany, geology, surveying and ethnography. The article also describes how various specimens were collected and transported to the UK, their investigation by scientists and their eventual places of custody in various institutions. Although there are specimens collected by the Schlagintweits in German institutions the present work concentrates on the collections that were originally housed in the India Museum of the East India Company before its dispersal in 1879.

The contributions to science made by the Schlagintweit brothers Hermann, Robert and Adolph were twofold. They not only continued a magnetic survey of India and the Himalayas between 1855 and 1857 on the death of surveyor Charles Elliot, carrying out important meteorological and geological studies, but they also accumulated a huge collection of zoological, botanical and ethnographical specimens. Many of these found their way to the India Museum, an institution created by the East India Company (EIC) in 1801 to house curiosities from their employees' travels, but they were eventually dispersed to other institutions on the closure of the India Museum in 1879.

The dedication and zeal with which the three brothers carried out their task did not go unnoticed by Governor General Lord Canning as he says in a minute to the Court of Directors of the EIC : 'I am not competent to speak to the value of scientific researches of Messrs Schlagintweit, indeed their result is not yet fully known, but of the energy and success with which they have pushed their investigations into countries where the assistance and direct protection of the Government of India could not follow them is in no doubt'.¹ Indeed their good sense and judgment resulted in Hermann Schlagintweit becoming the first person to be allowed by the Durbar to carry out scientific observations in Nepal.

The results of their observations can be consulted in a number of published sources. The most notable is their eight volume work of which only the first four were published, accompanied by a comprehensive atlas containing 80 views and panoramas and from 20-30 maps and profiles.² Information intended to be published in the last four volumes, particularly the results of the geological observations, are to be found in their reports which were sent back from India and published subsequently.³ The original manuscripts to these reports are held in the India Office Records (IOR) Military Department.⁴ Although posterity has judged their survey work to be inaccurate since they were not trained surveyors, 'their reports on physical geography and natural products and general description of the country are of the utmost interest and value and their coloured panoramas and landscape sketches are delightful'.⁵

Their collections however, are not quite so easy to track down although the India Office Library (IOL) holds a series of nine volumes containing specimens of native cloths.⁶ The only other printed record in the India Office Library and Records are two small index volumes of the collections of seeds⁷ and an inventory of objects transferred to the South Kensington Museum⁸ on the closure of the India Museum, which lists amongst other items the casts of heads, Buddhist prayer stones mounted on boards, and a sword. Other interesting relics are sketches of ethnographical heads⁹ and a volume of prints and facsimiles on cloth of Tibetan documents and objects of Buddhist worship including a Tibetan indigenous route map from Assam to Lhasa drawn in 1856.¹⁰

Such was the Schlagintweits' enthusiasm for collecting that the Sikkim party under Hermann Schlagintweit took on an extra four men at salaries of 9 rupees per month who were 'drilled to the work of collecting and preserving', in addition to eighteen other 'plant collectors and shooters'.¹¹ The number of people regularly employed in assisting the collecting varied according to circumstances. Only a few were hired at a fixed salary but greater numbers were engaged when the party remained a longer time than usual in one place. There were frequently great difficulties in assembling the number of people required and frequent changes of personnel which the Schlagintweits attributed to 'prejudices of caste, real and fictitious' and 'the want of energy which is so characteristic of the natives of India'.¹² An Indo-Portuguese zoologist named Monteiro from the Asiatic Society, Calcutta was general superintendent of the collectors at 45 rupees a month with special charge of the zoological collections. He usually stayed at places where materials could be sent down to him to be worked on. Monteiro was regarded as very competent and enthusiastic and was engaged on the zoological preparations a year after the Schlagintweits' departure from India.

According to the Bills of Lading altogether well over 200 packages, boxes, 'objects stitched in cloth' and 10 boxes of manuscripts, plans and drawings were sent *via* Calcutta to Sir James Melvill, the Company's Secretary at East

India House, by the vessels *Mystery*, *City of Tanjore* and *The Nile* at the rate of £3 per ton of 50 cu ft, by Messrs Borrodaile and Co. This valuable cargo was not insured because as John Borrodaile states 'we had no instruction to that effect'.¹³ This oversight could have had serious consequences since it is reported in a later letter that although several of the packages were clearly marked 'water' Borrodailes were apparently unaware that they contained liquids!¹⁴ Consequently, they were mishandled and considerable leakage occurred. The volume of 'curiosities' dispatched was so great that eventually Borrodaile and Co ceased to inform the Military Department of items sent. Seventy-four packages were sent via *The Nile* without the department's permission for which Borrodailes received a severe rebuke.

On arrival in the India Museum the zoological specimens were examined by Dr Thomas Horsfield (1773-1859), Superintendent of the Museum from 1836 and founder of the Natural History Section. In an appendix to a letter from the Schlagintweits to Sir Charles Wood, Secretary of State for India in Council, there appears a list of subjects received in the Museum.¹⁵ This included the ethnographic heads, hands and feet, prayer flags, three shrews in spirit, 1 leopard, 1 yak, slugs and many others. Horsfield was impressed by the state of preservation in spirit of many of the specimens, but singled out the ethnographical heads as the most important part of the collection.¹⁶ Several of the specimens were duplicates already preserved in the Museum but the hybrid yak was described as a 'valuable addition' and some of the lepidoptera and reptiles were new to science.

Dr A Günther, Keeper of the Department of Zoology in the British Museum (Natural History) was invited to examine the collection of reptiles. He also found them in excellent condition and identified several new species of snakes, saurians and batrachians, which were 'as interesting with regard to geographical distribution of animals as with respect to the system'.¹⁷ At first Günther asserted that the Schlagintweits had discovered a new genus. This was *Dicroglossus*, a type of toad found at Kulu and Simla at altitudes of 2400-4200 feet. It is described in Günther's major work on Indian reptiles¹⁸ as *Dicroglossus adolfi* in recognition of Adolph Schlagintweit, who was tragically murdered in Kashgar in August 1857. Despite this, it was later found that a species of this genus had already been described by zoologist J G Schneider in 1799, and is now known as *Rana cynophlictis*. However, at least two species of reptiles and probably many more discovered by the Schlagintweits were new to science. *Ablabes rappii*, now known as *Liopeltis rappi*, is a 16½ inch long black and white snake found at altitudes of between 5,340 and 10,200 feet in Sikkim, and *Eumeces himalayanus* (*Scincella himalayanum*) is an olive-green lizard of the skink family. A large number of reptiles were transferred to the British Museum (Natural History) in 1860 where many of the specimens are still perfectly preserved, some with the original labels.

Of the Schlagintweit collection of rocks and minerals there are 22 specimens of igneous and metamorphic rocks surviving in the British Museum (Natural History). There was originally a catalogue describing the specimens in this collection but it has been lost.¹⁹ There are, however, a few original Schlagintweit papers in existence relating to the collection in the Mineralogy Department Library.²⁰

Many of the botanical specimens from the India Museum were transferred to the Royal Botanical Gardens, Kew in 1879 including the entire economic-botanical collection containing 36 tons of wood specimens.²¹ However, there are no longer any surviving specimens at Kew identified as having been collected by the Schlagintweits²² and the only botanical material of which there is a record in the IOR are wood, soil and plant specimens and the catalogue of seeds mentioned above. On the dispersal of the India Museum collections there were 557 specimens of the Schlagintweit collections of wood bound with metal and mounted on tripod stands for exhibition.²³ However, William Thistleton-Dyer, at this time Assistant Director at Kew, was reluctant to keep them since the list compiled in 1869 by J R Royle, the son of economic botanist John Forbes Royle who founded the Industrial Museum within the India Museum, could not be found. Consequently, the specimens were given to Dr D Brandis, the Inspector-General of Forests in India for the Forest School, Dehra Dun, now the Forest Research Institute. Ironically the missing catalogue was later found but by this time the specimens had gone to India and the other wood specimens destroyed. It is not known whether the Institute still has these specimens since attempts to investigate the matter have proved in vain.

The India Museum also received about 1000 Schlagintweit soil specimens from India some of which were analysed at a cost of £42 at the request of John Forbes Watson, newly appointed Director of the India Museum, previously Reporter of Products of India. He reports in a letter to the Financial Department that the soils were eminently suitable for the growth of cotton and flax :

'... a result of importance and particularly so at the present time as affording not only the evidence of the interest HM Government takes in this matter but likewise fresh grounds of encouragement to those at length appear inclined to engage in private enterprize for the development in India of the raw textile products for which this country is at present dependent upon somewhat questionable and uncertain sources'²⁴

Although there are no surviving Schlagintweit botanical specimens at Kew, 2050 plants from the Himalayas and Tibet collected by the Schlagintweits were purchased by the British Museum (Natural History) in 1886 and 1900²⁵ and these can be seen pressed and carefully mounted on cards in the Herbarium at

the Natural History Museum, although arranged by areas of provenance rather than by specific collections.*

The remainder of the natural history collections were given or sold to widely scattered institutions apart from those already mentioned, such as the Indian Institute, Oxford, the Science and Art Museum, Dublin, the Philosophical Society of Scarborough, the Museum of Maidstone and the Indian Museum in Calcutta.²⁶ It is therefore possible that all these institutions received some of the Schlagintweit collections. In addition, the Dublin National Education Society requested and received a large number of casts of Himalayan fossils some of which are almost certain to have been collected by the Schlagintweits.²⁷

The ethnographic collection comprised 275 casts of the face and 38 of the hands and feet made by the Schlagintweits presumably on living subjects, and was bought by the India Office for the princely sum of £19 12s 6d. A selection of these were seen by members of the Asiatic Society of Bengal who discovered that : 'the original moulds were reproduced by making strong metallic casts of zinc and coating them with a galvano-plastic deposit of copper varied in tint according to the different degrees of colour of the native tribes'.²⁸ These items were transferred to the South Kensington Museum in 1879 and were subsequently given to the Dublin Museum in 1895.²⁹

Other cultural items from the collection mentioned in the inventory⁸ can now be seen on request at the Victoria & Albert Museum's store in Battersea. These include Tibetan praying flags comprising one original carved from a block of schist and several casts of zinc. Some are Chinese-looking representations of Buddha, surrounded by horses and dragons, others are purely Tibetan script. These stones were votive offerings to Buddha, the presentation of which the devotee could earn 'merit marks' even if made on his behalf by a priest. Other interesting items held by the V & A include a model hoe, weeding implements, an iron blade from a spade, various other tools and a sword (the latter in the main building). Many of the other items have however been 'written off' such as models of temples, woodblock prints of religious inscriptions, and a plough. Four original sketches of heads of the Limbu, Lepcha, Gurka and Parsi tribes drawn by Hermann Schlagintweit can be seen in the IOL.⁹

The Schlagintweit collection found a certain amount of exposure when the casts of heads were specifically requested by the secretary of 'Annual International Exhibitions' for display at the London International Exhibition of

* In reply to the referee's query : "From whom did the British Museum buy the Schlagintweit collection," the author writes as follows :

"I have recently contacted the British Museum (Natural History) Botanical Department. According to the 'Donations and Acquisitions' book July 1898 - Nov. 1900, the 703 plant specimens acquired in 1900 may have been purchased from a Mr. I. S. Hamilton of 53 Lansdowne Road, Notting Hill West, London, but there is no record of the provenance of the 1347 specimens purchased in 1886."

1874.³⁰ The purpose of the exhibition was stated, rather prematurely in retrospect, as '.... to illustrate the ethnology and geography of the different portions of the British Dominions and ultimately form a great National Museum of the Empire upon which the sun never sets'. This opportunity was seized by Forbes Watson since he was evidently having some difficulty in finding room in the museum for all his exhibits: 'The bulk of the collections referred to can be readily lent for the purpose in question as it is only possible to show a portion of them in the space available at the present museum'. Despite this Forbes Watson essentially disapproved of exhibitions stating in letters to *The Times*³¹ and in his *Industrial survey of India* (1872) that they concentrated too much on popular visual appeal at the expense of selectivity and systematic arrangement.

The Schlagintweit brothers also produced about 700 sketches of views in India and High Asia, although they were never part of the India Museum collection. They succeeded in finding a photographer prepared to take colour pictures of the sketches with a view to eventual publication. In a letter to J C Melvill³² it is stated that F A Brockhaus of Leipzig were prepared to publish these sketches in 20 volumes but it seems as if the work never appeared although some of the original drawings and photographs can be seen in the State Collection of Drawings in Munich (see appendix). It was also intended to dedicate this publication to Queen Victoria,³³ who was presented with some of the pictures, and a very favourable review of the drawings appeared in *The Art Journal* of 1859:

'A photographic edition of the whole set with a peculiar and novel mode of reproducing the original effect by a skilful combination of colouring with printing on paper previously slightly tinted, is being prepared and will no doubt meet with the deserved success since the originals are evidently drawn by artists possessed of eyes for the picturesque and of a fine feeling for the beautiful and grand in nature'.

The Schlagintweit collections and scientific work in India and the Himalayas drew the attention of the Grand Duke of Russia who took considerable interest in parts of the collections which could not be accommodated in India House. Also the King of Bavaria conferred titles of nobility on Hermann and Robert for their outstanding contribution to science, an honour for which they expressed much gratitude to India House: '.... we feel that we owe this high distinction to the important scientific mission with which India House did the honour to entrust us'.³⁴ This dedication is, however, immediately followed as the final paragraph in this letter by a return to the more mundane matter of payment, the procurement of which had been a great source of difficulty and delay since the start of the mission. There is little doubt however that the Schlagintweit brothers were good value for money for the collections alone apart from their important scientific and artistic work.

The writer would be pleased to hear from any institution which holds any Schlagintweit material not mentioned in this article.

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The Royal Botanic Gardens, Kew, especially David V Field of the Economic and Conservation Section.

REFERENCES AND NOTES

- ¹ Enclosures to Military and Marine Letters and Despatches from Bengal and India, 1857. IOR L/MIL/3/618. Enclosure to Letter 172 of 3 June 1857, Minute to the Court by Canning 13 May 1857.
- ² Schlagintweit, Herman, Adolph and Robert, *Results of a Scientific Mission to India and High Asia undertaken between the years 1854 and 1856 by Order of the Court of Directors of the Honourable East India Company with an Atlas of Panoramas, Views and Maps*, Leipzig and London, 1861-66. IOL X286, X287 : IOR V/27/400/2-5 (Volumes only), Map collection IOR X320/5 (Atlas only).
- ³ i) *Report upon the Progress of the Magnetic Survey of India and the Researches Connected with it in Sikkim, Khasia Hills and Assam from April to December 1855* by H. Schlagintweit, Madras, 1856. IOL P/T 2569.
ii) *Report upon the Progress of the Magnetic Survey of India ... in the Himalayan Mountains from April to October 1855*, by A and R Schlagintweit, Agra, 1856. IOL P/T 2572.
- ⁴ Compilations and Miscellaneous. IOR L/MIL/5/243(400).
- ⁵ Phillimore, R.H., *Historical Records of the Survey of India, vol V, 1844 to 1861*, Survey of India, 1868.
- ⁶ *Technical Objects from India and High Asia, collected by H., A. and R. Schlagintweit, 1854-1858*. IOL X366.
- ⁷ *Index to Messrs Schlagintweit's Collections : Vol II 'Seeds'*. Part 1. Sent to the India House Museum, December 1858.
- ⁸ *Inventory of the Collection of Examples of Indian Art and Manufactures Transferred to the South Kensington Museum*. IOL W2010.
- ⁹ Brockhans, F.A., *Messrs de Schlagintweit's Ethnographical Heads from India and High Asia 1854-1858*, Leipzig. IOL X312.

- ¹⁰ *Prints and Facsimiles of Objects of Buddhist Worship and of Various Tibetan Documents, collected 1854 to 1858* by H., A. and R. Schlagintweit. IOL X824.
- ¹¹ Bengal Military Letters and Enclosures (hereafter BMLE) 1856. IOR L/MIL/3/587, coll.26 from Letter no.30, 2 Feb 1856. H. Schlagintweit to Secretary to the Military Department, Government of India, 2 Dec 1855.
- ¹² Introduction in Vol I of work cited in ref. 2.
- ¹³ BMLE 1856. IOR L/MIL/3/592, Enclosures to Letter no.134, 18 April 1856. J. Borrodaile to Secretary of the Military Department, 10 April 1856.
- ¹⁴ *Ibid.*, IOR L/MIL/3/596, Enclosures to Letter no.215, 3 July 1856, Military Secretary to Secretary in Charge of the Marine Superintendent's Office, 14 June 1866.
- ¹⁵ Military Department Miscellaneous Letters Out (hereafter MDMLO) 1859. IOR L/MIL/2/1477 [coll.] no.29, H. & R. Schlagintweit to Sir Charles Wood, Secretary of State for India in Council, 21 July 1859, appendix 2.
- ¹⁶ *Ibid.*, appendix 1.
- ¹⁷ *Ibid.*, appendix 3.
- ¹⁸ Gunther, Albert C.L.G., *The Reptiles of British India*, Ray Society, London, 1864. IOL X/1002.
- ¹⁹ According to D.T. Moore, Curator of the Mineralogy Department.
- ²⁰ Moore, D.T., 'Geological Collectors and Collections of the India Museum, London 1801-79', *Archives of Natural History*, **10** (3) 399-427, 1982.
- ²¹ Kew Report 1880.
- ²² According to D.V. Field of the Economic and Conservation Section.
- ²³ Statistics and Commerce Papers (hereafter SCP) 1880. IOR L/E/6/39 no.253, W. Thistleton-Dyer to Sir Louis Mallet, Under-Secretary of State for India, 20 February 1880.
- ²⁴ Financial Papers (hereafter FP) 1860. IOR L/F/2/241, no.802, J. Forbes Watson to T.L. Seccombe, Secretary in the Financial Department, 13 June 1860.
- ²⁵ *The History of the Collections Contained in the Natural History Department of the British Museum*, British Museum, London 1904-6. Vol 1, p.180.
- ²⁶ SCP 1880. IOR L/E/6/40 no.353, 'Extract from a Report to the Trustees of the British Museum by Dr. Günther of the Department of Zoology', 8 March 1880.
- ²⁷ FP 1861. IOR L/F/2/249 no.635 and L/F/2/250 no.705.
- ²⁸ MDMLO 1859. *Op.cit.*, appendix 5.
- ²⁹ According to J. Clark from the 1880 register of the Victoria and Albert Museum.
- ³⁰ FP 1874. IOR L/F/2/434 no.505, J.A. Wright to the Under-Secretary of State for India, 18 February 1874 and other documents.
- ³¹ *The Times* 28 & 30 December 1872 and 9 June 1874.
- ³² FP 1859. IOR L/F/2/230 no.200, H. & R. Schlagintweit to J.C. Melvill, 20 June 1859.
- ³³ MDMLO 1859. *Op.cit.*, H. & R. Schlagintweit to Secretary of State for India in Council, Sir Charles Wood.
- ³⁴ *Ibid.*, H. & R. Schlagintweit to J.C. Melvill, 1 October 1859.

Other references

Desmond, R., *The India Museum 1801-1879*, HMSO, London, 1982.

APPENDIX

LIST OF INSTITUTIONS AND INDIVIDUALS IN POSSESSION OF ORIGINAL
SCHLAGINTWEIT MATERIAL (AS SUPPLIED BY
BAYERISCHE STAATSBIBLIOTHEK, MUNICH).

- State Museum of Ethnology, Munich : 4-500 ethnographical objects correspondence (?), parts of the atlas.
- State Collection of Drawings, Munich : sketches, aquarels, colour photographs.
- Bavarian Central State Archives : for this see Hans Körner *The Schlagintweit Brothers*
- University Archives, Munich : . letter(s).
- Museum of Germany, Munich : letters, 2 measuring instruments.
- State Botanical Collection, Munich : *ca.* 700 dried plants, 1 letter of Herman's, 1 portrait of Adolph.
- State Zoological Collection, Munich : animal specimens, 1 letter, 1 document.
- State Palaeontological Collection Munich: fossils : ammonites amongst others.
- Library of the German Alpine Society, Munich : 1 seal used by the Schlagintweits, 1 view of the Jagersburg 7.5×4.4 cm.
- Alpine Society Museum, Innsbruck : 1 photograph of Adolph and Hermann Schlagintweit 9×12 cm.
- Museum of Ethnology, Berlin : East Asia Department : 72 ethnographical objects (420 until World War 2), correspondence, lists of the collections. South Asia Department : *ca.* 300 objects (685 until World War 2).
- British Museum (Natural History) : zoological and botanical collections.
- Victoria and Albert Museum : prayer stones, tools, *etc.*
- Bodleian Library, Oxford : Tibetan manuscripts.
- Royal Geographical Society : 1 manuscripts : 'Journey across the Kuenlen to Khotan'.
- India Office Library and Records : 3 manuscripts, letters, examples of native cloths, sketches, atlas, several publications (list on request).
- The Schlagintweit Collection, Bad Wiessee (Dr Stefan Schlagintweit) : sketches aquarels, letters, documents.
- Geological Institute Library, University of Melbourne : 1 copy of a work concerning the Alps with manuscript notes.

GERMAN LIBRARIES HOLDING SCHLAGINTWEIT LETTERS

- Prussian State Library of Culture (Staatsbibliothek Preussischer Kulturbesitz), Berlin.
- Bavarian State Library (Bayerische Staatsbibliothek), Munich.
- Univeristy Library, Munich.
- City Library, Munich.
- University Library, Giessen.
- University Library, Freiburg.
- Regional Library, Wiesbaden.

City Archives, Hanover.

City Archives and Regional History Library, Bielefeld.

City and Regional Library, Dortmund.

Germanic National Museum, Nuremburg.

University Library, Bonn.

German Archive of Literature, Marbach.

City and University Library, Hamburg.

City Archive, Braunschweig (Brunswick).

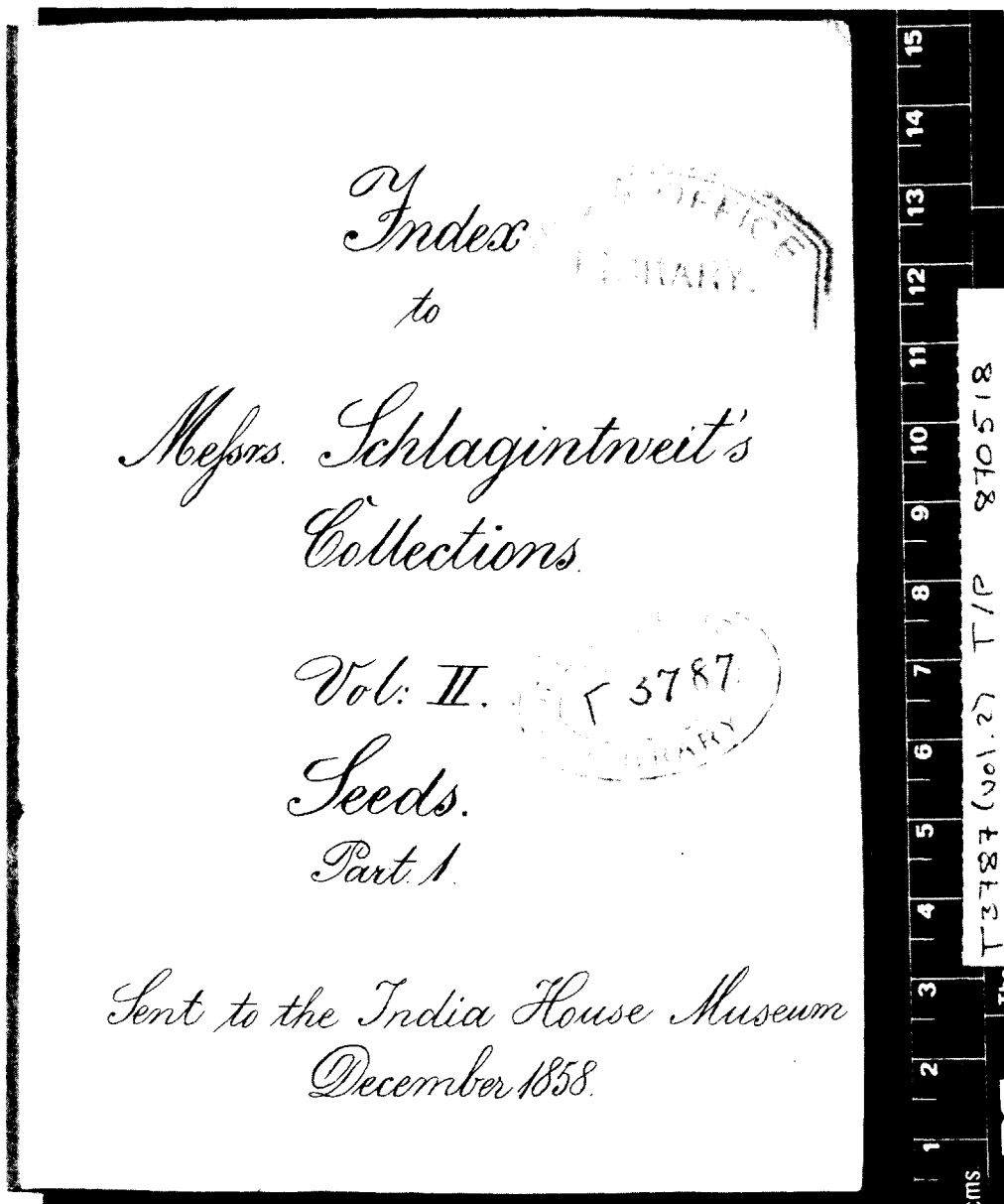


Plate 2.

Title page. *Index to Messrs Schlagintweit's collections vol. II, 'Seeds', part 1.* Sent to India House Museum, December 1858. IOL T3787. (By courtesy of the British Library).

Coll. Schlagintweit: Seeds.

Hind. Name: *Lāl-Sāg* لال ساڻڻ

Engl. *Fox-tail*, Deutsch *Fuchsschwanz*

Bot. Name: *Amaranthus gangeticus* Lin.

Loc.: *Jhósimath, Gärhvál*

Height: 6200 E. F.

163

Plate 3

Details of specimen of seeds. *Index to Messrs Schlagintweit's Collections*, vol. II, 'Seeds' part 1, no.163. *IOL T3787*. (By courtesy of the British Library).

29

Bhutan Map
of the commercial route
From Assam to Lhasa
via Sikkim

Drawn by Kāuāng, Raja

Kāuāng, January 1856

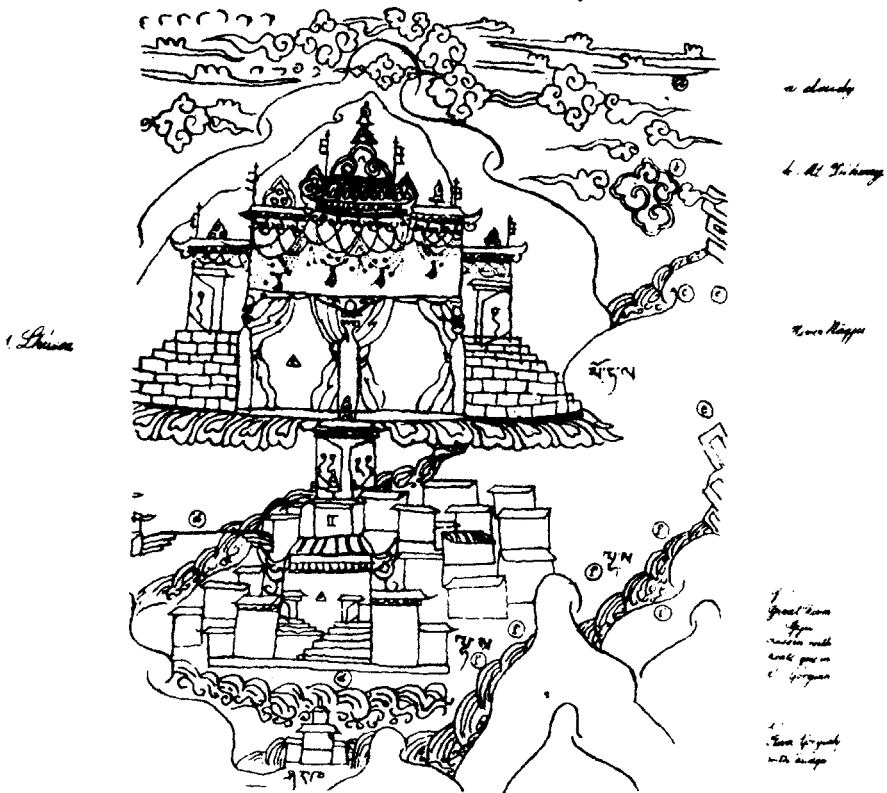


Plate 4.

Indigenous Tibetan route map on cloth showing route from Assam to Lhasa. Prints and facsimiles of objects of Buddhist worship and various Tibetan documents collected 1854-1858 by H. A. and R. Schlagintweit. IOL X824. (By courtesy of the British Library).

402

BATRACHIA.

DICROGLOSSUS, *Gthr.*

Fingers free; toes broadly webbed; tongue rather elongate, deeply notched behind; vomerine teeth none; openings of the eustachian tubes of moderate width, tympanum indistinct; vocal sacs of the male external and lateral.

Only one species is known.

DICROGLOSSUS ADOLFI.

Dicroglossus adolfi, *Günth. Proc. Zool. Soc.* 1860, p. 158. pl. 28. fig. B.

Skin smooth or warty; toes webbed to their tips by a very extensible membrane; a cylindrical tubercle at the metatarsus, very much like the rudiment of a sixth toe. Above greenish or greenish brown, uniform or spotted with darker; belly with dark specks.

In habit and size somewhat similar to *Bombinator igneus*, but with the snout more pointed. The skin is in some specimens warty, in others smooth. The tympanum is rather indistinct, and not quite the size of the eye. The inner nostrils are small and rather distant from each other, the openings of the eustachian tubes larger. The limbs are of moderate length; the fingers quite free: the third is the longest; the first is very little longer than the second and fourth, which are equal in length. The fourth toe is one-fourth longer than the fifth. The species varies considerably in coloration, and the most constant characters appear to be brownish specks on all or some of the lower parts, and a brownish streak on the hinder side of the thigh.

Length of the head and body 1 inch 7 lines; of the fore leg 10 lines; of the hind leg 2 inches 4 lines.

This species was discovered by Messrs. von Schlagintweit at Kalu and Simla, at elevations of from 2400 to 4200 feet above the level of the sea.

RANA, *auct.*

Fingers quite free, none of them opposed to the others; toes webbed; head covered with skin. Vomerine teeth in two series or groups; tongue large, oblong, free and deeply notched behind. Metatarsus with one or two blunt tubercles.

Plate 7.

Entry for *Dicroglossus adolfi*, a species of toad originally thought to have been discovered by the Schlagintweits. Albert C L G Günther, *The reptiles of British India*, Ray Society, London, 1864. *IOL X1002*. (By courtesy of the British Library).

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