PROCEEDINGS OF THE NATURAL HISTORY SOCIETY OF THE MAURITIUS.

October 5, 1830.—The Society, after having during a year held its sittings in the house of Mr. C. Telfair, President, met this day, for the first time, in an appartment of the Royal College, prepared for it. The Secretary presented a variety of works, as donations from various sources, to commence the basis of a Library.

Mr. C. Telfair presented a case of minerals arranged according to the method of Haüy; Dr. Lyall presented minerals of different countries, with a catalogue; The Rev. D. Johns, in Madagascar, sent several specimens of the produce of tanneries established in that island; Mr. J. Desjardins presented 150 colcopterous insects, forming 40 species, derived from the collection of Cte. Dijeon, and named by that skilful entomologist; Made. Faraguet and Madlle. Durand, presented figures of the fruits of the colony.

Mr. Faraguet exhibited a map of Tongataboo, where he, in his visit in the Astrolabe, nearly fell a victim to the perfidy of the inhabitants; he being the youth who was carried off by them.

Mr. Desjardins read a notice of a grey Cuckoo (Cuculus Canorus. Lin.) killed in the district of Flacq. This is the second instance in which this species, which certainly comes from Madagascar, has been observed in this island.

A letter was read from Capt. Pole, R. N. proposing a new method of moving steam-ships, which was committed to Mr. Faraguet to report thereon.

Mr. L. Bouton read a notice respecting various errors current in regard to the Botany of Mauritius, alluding particularly to an article in the Voyage of La Coquille, and to certain mistakes in the *Dictionaire des Sciences Naturelle*.

Mr. E. Lienard read a notice of a vegeto-animal substance, which he conceived to belong to the numerous genus of Alcyonium.

Mr. J. Lienard described one of the *Crustaceæ*, of the genus Podophthalmus. It is common on the shores.

November 9.—Several books were presented to the Society. There were elected—as an Ordinary Member, Mr. Dowland of the Mauritius; and, as Correspondents, Messrs. M. Sanzier of Bourbon; Professor Hooker, Glasgow; N. Vigors, Secretary to the Zoologic. Society, London, G. Don, Librarian to the Linnean Society, London; Ad. Brougniart, D.M.P.; Vic. Audouin, D.M.P.; Milne Edouards, D.M.P.; Adrian Fussiew of Paris; Robert Barclay, Bury-hill, London.

Mr. J. Desjardins read remarks on two chapters of the *Voyage de l' Uranie*, relating to the Mauritius.

Dr. Lyall exhibited Sir H. Davy's Safety Lamp, accompanied by verbal remarks; and also, an Apparatus for rapid cooking of food, in which he dressed in less than three minutes, a beef-steak, in presence of the Society.

Capt. Longmore communicated a drawing of the fruit of the Vacqua (Pandanus.), which is common in our forests.

Mr. Ch. Telfair deposited with the Society, an extract of a letter from Councillor Schreiber, to Professor W. Bojer, V. P. dated at Vienna, 12th June, 1830, which was sent, accompanied by a gold medal and a donation of 1000 piastres, as a testimony of the high esteem which His Majesty the Emperor of Austria entertained for the zeal and acquirements of Mr. Bojer.

Dec. 7.—There was admitted as Member, Mr. J. R. Barry, Professor of Greek in the College of Mauritius; and, as Correspondents, Sir John Jameson, Dr. A. Nisbet, Sir W. E. Parry, Mr. F. E. Guérin, Mr. Achille Richard.

Mr. J. Desjardins reported, that he had received notice that Baron Cuvier had ordered a bust of himself to be prepared for the purpose of being presented to the Natural History Society of the Mauritius; and that this illustrious Naturalist had read in the Institute, a memoir relating to a note from Mr. J. Desjardins, on bones which he conceived to belong to the *Didus ineptus*, (the Dodo,) and which were being compared with those in the British Museum.

Mr. Faraguet continued his observations on the Machinery proposed by Capt. Pole, for the movement of steam-ships.

Mr. L. Bouton, after having presented to the Society the *Essay on the Family of Thalassiophyta*, by Lamouroux, and the

Monograph of the Orchidiæ of the Isles of France and Bourbon, by Ac. Richard, made a report and eulogium upon this latter work; and submitted observations on the species growing in Mauritius, which Mr. Ac. Richard had had no opportunity of seeing and examining. He intimated his opinion, in opposition to that of Richard, that the Botany of the Mauritius presents closer relations with that of the African Continent, than the Indian Archipelago: that this resemblance, however, extends not to the Southern extremity of Africa, but only to the tropical part of the continent opposite to the Mauritius, and particularly to the coast of Zanguebar, which has been visited by Mr. Bojer.

Mr. J. Desjardins read a detailed description and historical remarks, on two points on the Southern coast of Mauritius, viz. *The Souffleur* or *Montagne Chaour*, and the Trou Gallet. He read also a description of a fish of the genus *Serranas*, and exhibited a specimen. He noticed also three other memoirs, which he deposited in the achives of the Society, viz. 1. A notice of the *Charanson* of Mauritius, (*Curculio striga*. Fabr.) belonging to the genus *Menœtius* of Schoenherr. 2. A notice of two Asteriae, viz. Asterias discoidea (Lamarck), and A. Loevigata (Lamarck). 3. A notice of the Tanrec (Erinaceus setosus. Cuv.), and particularly of a specimen entirely red, found at Flacq.

Dr. Lyall announced his intention to lecture on the Preparation of Sugar, and the processes by which it is rendered marketable. He also proposed that a selection should be made from the memoirs in their possession, for the purpose of being printed.

January 11, 1831.—Mr. C. Telfair, President, presented to the Society, in the name of His Excellency the Governor Sir C. Colville, 1. The Transactions of the Royal Asiatic Society of Great Britain and Ireland, vols. i. & ii. 2. A Catalogue of the Books in the R. A. S. Library, London. 3. A Report of the Proceedings of the third Annual Meeting of the Subscribers to the Oriental Translation Fund; and the Report of the Committee, London, 1830. 4. Report of the Committee of Correspondence of the R. A. S. of Great Britain and Ireland, London, 1829. It was resolved, to transmit to His Excellency, the Meteorologic Observations made at Port Louis in 1827, 1829, 1830, by Mr. L. Geoffroy; the Observations of 1828 being already inserted in the Transactions of the R. A. Society.

The Society received from the South African Institution, its Annual Report for 1830.

A Letter was presented from the Secretaries of the South African Institution, of date 27th October 1830, and containing

extracts from its minutes, expressing a resolution of the S. A. Institution, that all Members of the Natural History Society of Mauritius, who should visit the Cape of Good Hope, should be received as Corresponding Members of the Institution: and requesting the privilege of translating and publishing in the South African Quarterly Journal, the Annual Report of their Proceedings, of which the Natural History Society had sent a copy.

The Society resolved to accede to the request of the S. A. Institution, and to announce to it, that its Members should enjoy at the Mauritius, the same privileges as then conferred by the Institution at the Cape of Good Hope, and that copies of the Monthly Notices of the Proceedings of the Society should be transmitted to the Institution, with a request that a similar arrangement might be made by it, in favour of the Natural History Society.

Dr. Lyall presented to the Society, specimens of the plants which he had gathered in Madagascar, which form the commencement of the Herbarium which the Society proposes to collect. The specimens are in a state of high preservation, and amount to 598, and are marked in a catalogne presented along with them.

Mr. Barry, on his reception as a member, delivered a discourse, in which he particularly remarked, that the Society, by the results of the past year of its existence, had already attracted the notice of many philosophers of other countries; Associations of celebrity are already in correspondence with it; and that it has received a most flattering testimony, in being found worthy of commendation by the most celebrated naturalist of the age, Baron G. Cuvier, who had already favoured it by the presentation of several of his works. Mr. Barry then proceeded to present some general views on the subject of terrestrial refraction, and on singular results which have been for sometime remarked, especially in regard to the kind of knowledge termed *Nauscopia*. In regard to this subject, some explanations were given by the President and by Dr. Lyall.

Mr. L. Bouton presented a specimen of the Eaglewood or Aloewood (Aloexylon agallochum of Loureiro), and read a historical and descriptive notice of it.

Mr. Faraguet offered some verbal elucidations in regard to several objects which he had procured during his voyage in the Astrolabe, among others, a root of *Kava*.

Mr. J. Desjardins read notices of some fishes from the North-west coast of Sumatra, and also of two species belonging to the Geneva Labrus and Coryphoena.

Mr. Lequitte of Port Louis, transmitted to the Society a young dog with six feet; and Mr. Hungerford Hoskyns presented the seeds of a textile plant from Diego, which Captain Pole, of the Maidstone, had employed for the fabrication of cordage, and found it much superior to that which in Europe is made of hemp.

There were elected as Corresponding Members, the Rev. J. Adamson, Cape Town; Mr. C. Desbassays of Bourbon; Mr. C. Frazer, Sidney; Mr. Allen Cunningham, Sidney; Mr. Richard Thomas, Cambridge University; Mr. J. R. C. Quoy of Rochefort; and Mr. Jh. Paul Gaimard of Toulon.

February 8.—Mr. Priée, director of the Botanic Garden at Pondicherry, and M. le Baron Ferussac of Paris, were elected Corresponding Members.

Dr. Lyall continued his lecture on the Preparation of Sugar. In asserting that lime is the best substance to use for the clarification of the syrup, he observed, however, that the lime prepared from madrepores and substances known by the name of coral, is little fitted for the purpose, on account of the animal substances contained in them, and the presence of sulphate of magnesia, combined with the sea salt, wherewith these masses are, as it were, saturated. He added, that the lime (protoxide of calceum) ought always to be preserved dry and excluded from the air, on account of its avidity for carbonic acid. Lime exposed to the air becomes neutralized, and thus no longer can aid in producing the salts contained in the cane. The lime derived from calcareous rocks, such as those met with in Madagascar, where there are found enormous masses of the carbonate, would answer better. Dr. Lyall suggested, that ships from England might, as ballast, bring this stone from Bristol, and it might be burnt in the island.

Messrs. Telfair, Delisse, senr. and Faraguet, made some remarks on this subject. Mr. Telfair intimated that the Bristol lime-stone had already been used in the island, but notwithstanding its acknowledged excellence, it had made no great variation in the quality of the sugar.

Mr. L. Bouton read some observations on the posthumous work of Mr. Thouin, entitled *Cour de Culture et de Naturalization des Vegetaux*. He noticed some errors which had crept into the first part of this work, which contains a short history of Agriculture. One of these errors is relative to the state of Cultivation in the Isles of France and Bourbon. Mr. Thouin announces the cultivation of coffee, sugar, indigo, and cotton, as the sources of wealth to these colonies. It is, however, the cultivation of sugar only, which is generally followed in the

country, and that of indigo is totally abandoned. Mr. Thouin also mentions the cultivation of a species of vivacious rice, propagated by cuttings, which, in fact, is the *dry rice* introduced from Cochin China by Mr. Poivre, of which he has reaped only a few crops. Mr. Thouin asserts also, that Mr Céré had succeeded Mr. Aullet in the superintendence of the garden at Reduit, whereas Mr. Céré had been appointed Director of the garden at Pamplemousses. Mr. Bouton terminated his remarks with some general views regarding the agriculture of the island.

The Secretary read a communication from Capt. Longmore of the Royal Staff Corps, containing a preamble, a report of date 12th October 1830, and an order of General D'Entrecasteaux, on the 20th April 1788, relative to the erection of two marks in the plane of *Fort Blanc*, by Mr. L. Geoffroy; and to the verification and replacement of one of them, after the interval of 52 years. These marks, placed at the distance of 901 toises and 2 feet, determine a base exactly in the plane of the horizon, and serve to connect the Geodesic operations of the astronomer La Caille in 1753, with those which Mr. L. Geoffroy had occasion to carry on afterwards.

Mr. Cameron, correspondent at Madagascar, transmitted to the Society, specimens of minerals, which Mr. Delisse and Dr. Lyall were commissioned to examine, and to report on them.

Mr. J. Desjardins read an analysis of the Zoologic department in the account of the voyage of l'Uranie, by Mr. M. Quoy and Gaimard. He elucidated especially those passages which relate to the Mauritius, in the four great classes of vertebrated animals.

The President presented to the Society, as a donation from Mr. Chaix, a colonist, 1. The Traité sur les puits Artesiens, by F. Garnier, 2d edit. 2. A pamphlet on the manipulation of sugar and on other branches of colonial industry. 3. A pamphlet on percussion presses.

March 8, and April 11.—The Secretary presented to the Society, the *Analyse des Travaux de l'Academie des Sciences de Paris*, for the different years 1822, 1825, 1826, and 1827, by Baron G. Cuvier: these analysis having been sent to him by the Secretary of that illustrious body.

Dr. Lyall read a notice in regard to the Astronomical Observations made by him at Tananarivo, capital of the kingdom of the Ovas, in Madagascar: from it results that this city is in 11°. 56'. 20". south lat. and 47°. 57'. 46". long. east of Greenwich, or 45°. 37'. 22". east of Paris.

Dr. Lyall also communicated some details in regard to two plants which Mr. Bojer met with in Madagascar, and which

were collected by Dr. Lyall in the same localities. One is the *Euphorbia splendens*, (Boj.), now distributed in several of the gardens of Mauritius, and of which a variety with yellow flowers, from Madagascar, was made known to the Society by Dr. Lyall. The other is the *Poinciana regia*, (Boj.) which also has been introduced into Mauritius. Both are described and figured by Dr. Hooker of Glasgow, in his late publications.

Mr. Lienard (Father) read a detailed description of a fish of the Island of Mauritius, belonging to the genus Pleuronectis, and distinguished by certain of the rays of the pectoral fins, which are as long as the animal itself. A figure of this fish, by Mr. Lienard, jun. accompanied this description. The fishermen of the island rank this fish among the *soles*.

Mr. J. Desjardins read the second part of his analysis of the Zoology of the voyage of l'Uranie, giving an account of its notices of invertebrated animals, and especially of the Polypes and Polypiers, which occupy so prominent a place in the Natural History of the Mauritius. He also communicated an account of the hail which fell at Camp de Masque, in the district of Flacq, on the 8th Feb. last. The hailstones were of the size of small peas, and several plants had their leaves torn.

A letter was read from Professor Quoy of Paris, full of scientific details. The following occurred among other expressions, seconding what had been advanced in the analysis above-mentioned, of the Zoology of the voyage of l'Uranie, "overthrow then this popular opinion of coral being a vegetable; you who reside in the island have, for this purpose, greater facilities and more influence than we who are visitors."

A letter from Dr. Smith at Algoa Bay, announced that the analysis of the labours of the Society, and the articles communicated to the Society, would be published in the South African Quarterly Journal.

A letter from Mr. M. Sauzier of Bourbon, announced that the volcano of that island had been making powerful eruptions, by two distinct craters, in the months of November, December, and January; but though there had been a considerable accumulation of smoke, and there had appeared during the night, a glow such as had not been observed for a long time, yet no flow of lava had occurred, as had been reported at St. Dennis.

Mr. Telfair, President, communicated several detailed notices, which Mr. Cameron had transmitted to him from Madagascar. They related to Minerals; and particularly to an aerolite or meteoric stone, which had fallen on the coast of Mozambique. Mr. Cameron announced, that Ranavalon Manzaka, Queen of the Ovas, had set apart the sum of £60 sterling,

to defray the expense of a course of practical chemistry, which had been commenced, and in which several of the natives were lending their aid, who, by their previous education, had been prepared to understand that science.

Mr. J. N. de Casanova was elected a Member of the Society. He presented a pamphlet, of which he is the author, entitled *Examen de las Aguas Minerales de San Pedro; noticias topograficas de su partido y sus propriedades Medicas.*

Mr. Bernard, Provost of the Royal College, was also elected a Member.

May 17, and June 14.—Mr. Lienard (Father) read a description of two fishes of our island; one of them is known to the fishermen by the name of *Battoir*, and, as it presents none of the characters which would serve to arrange it amid the genera of the family of *Percoides*, to which however it belongs, it has in the mean time received the name of *Platésome*. Mr. E. Lienard presented a figure of this fish. The other, which fishermen call *Lion Mâle*, as a *Holocentrus*, but is not, in the opinion of Mr. Lienard, the H: Sammer. (Cuv. & Val.) Neither of them is used as food.

Mr. J. Lienard read the description of a Crab, of the genus *Portunus*, of which he also presented a figure. It is one of those eaten in the island. He also read a description and presented the figure of an *Acanthurus*, which is very rare in our seas.

Mr. Faragnet presented and explained a table, constructed by him, to represent geometrically the law of the variation of temperature in the sea, at different depths. He founded his construction on the experiments made on board the Astrolabe, which alone in regard to this subject are worthy of trust. They show that at the depth of 820 fathoms, the temperature is 6°.4 Cent. (43° Farnh.), and the curve representing the rate of variation, is a parabola of a high order, having for its asymptote a vertical line corresponding to the temperature of 4° or 5° Cent. At the depth of 1000 fathoms, a cylinder of copper-plate, more than three lines thick, was crushed; which is easily accounted for, when we calculate the pressure it had to sustain.

Mr. Barry presented a notice of the temperature of mines at different depths. By observation made in the Cornish mines in 1815, it results, that at the depth of 1400 feet (English), the temperature of mines exceeds that of the surface of the earth by about 28° Farnh. and that the heat augments in proportion to the depth, at the rate of about 1° for 65 feet.

Mr. J. Desjardins read a notice of certain species found in the Isles of France and Bourbon. He also, in conjunction with Mr. L. Bouton, read a memoir regarding the naturalist Com-

merson, who arrived in the island with Bougainville, in 1768, and remained in it to study its productions; for which purpose he enjoyed unequalled means and advantages. After a voyage to Bourbon and Madagascar, he returned to the Mauritius, where he died on the 3d March 1773, at a dwelling in the district of Flacq, known by the name of La Retraite; the ruins of which are still to be seen near the great road which leads to the Post.

Mr. Telfair (President) enriched the collection by a donation of 40 Tasmanian birds.

Mr. Lislet Geoffroy presented to the Library, the Analysis of the labours of the Royal Academy of Sciences, from 1812 to 1829.

Mr. E. Baker, who had sent from Madagascar several MSS. on different subjects, was elected a Corresponding Member.

July 20.—The President read a letter from Sir Alexander Johnstone, to His Excellency the Governor Sir C. Colville, dated at London, 26th February: this letter intimated that His Royal Highness the Duke of Sussex, President of the Royal Society of London, would grant his patronage to any Philosophic or Literary Society, which might exist at the Mauritius. It communicated also, the favourable reception which had been given by that illustrious Society, and by the Royal Asiatic Society, to the observations on the Comet of last year, made by M. Dabadie, Professor of the Royal College.

Mr. L. Bouton communicated an extract from a letter of M. Ad. Brongniart, in which he solicited him to procure the aid of the Natural History Society of Mauritius, in enriching the School of Arts and Manufactures; where this philosopher is conducting a course of Natural History: specimens of articles in every department, which in the island are in any way useful in domestic economy, are the objects which will suit this new seminary.

Mr. Lienard (Father) having proposed to write to His Excellency the Governor, to request his patronage to a Class of Physics and Chemistry, and a Class of Natural History, which are proposed to be substituted for that of Botany, in the Royal College; Mr. Delisse (Father) read an article which he had composed on this subject, which the members present unanimously requested him to publish.

Mr. Bojer offered verbally, some details regarding two birds from Agalega, a male and female, which he conceived to be the *Ibis* of the ancients. These specimens were presented by Mr. Delisse (Father).

There were presented by Mr. Wiehe, a merchant of the

island, a superb tiger's-skin, measuring from one extremity to the other, 12 feet: by Mr. Telfair, the embalmed head of a New Zealand Chief, whose name was Mallawollo; by Captain John Briggs, the side of a Woman, which had fallen to his share at a feast, to which these Canibals invited him. Mr. Briggs having saved from death, a Child of 7 or 8 years old, whom they were about to sacrifice, took him under his protection, and brought him hither,—this child was produced at the meeting, and seemed in features to differ in nothing from the Malagasses, or from the mulatto creoles of the island. There were transmitted, from Mr. Cameron in Madagascar, the skins of two Snakes, a dozen of Specimens in Mineralogy, and three cases of Insects, with remarks on their properties, &c.

Capt. Briggs and Mr. R. Campbell, of Sidney, were proposed as Corresponding Members, and both being present, they presented notices and details regarding the manners of the New Zealanders.

SECOND ANNUAL MEETING.

Aug. 24, 1851 —Mr. Faraguet observed in regard to the minutes of the last sitting, that the notice of the young New Zealander was not entirely correct, when it was announced that this child differed in nothing from the Malagasses or mulatto creoles It is well known, he remarked, that these people do differ from those who inhabit Madagascar, but in this individual case, the distinction is not in many respects sensible.

Capt. Briggs, Mr. R. Campbell, and Mr. S. Lair, D.M.P. of Paris, were admitted Corresponding Members

There were presented as donations, by Mr. L. Bouton, three pamphlets belonging to the Memoirs of Decandolle, viz. *Extrait des Annales des Sciences Naturelles sur les lenticelles des arbres et le developpement des racines qui en sortent*; and two others, *Pour servir à l'Histoire du Règne végétal*, which had been sent him by Professor Hooker:—by Mr. Moon, D M. Cooper's great work on Anatomy, entitled *Myotomia Reformata*;—by Mr J. J. Cooper, the work entitled *Liverpool and Manchester Railway*, being a collection of interesting plates;—by Messrs. Lienard (Father, and son) 25 Fishes of the Island, preserved in spirits, being individuals of determined species;—by C. Telfair, jun. the Caudal Fin of the *Squalus Glaucus*:—by Mr. Felix Bouron, the Skeleton of a Malagasse, and five Skulls, belonging to the following subjects: viz 1. a young

Mozambiquer, 2. an Indian from near to Calcutta, 3. a Malagasse Hayzal, who died in the hospital of La Grande Riviere, after having engaged in the conspiracy of the Malagasses in 1822; 4. a Mozambique Adult; 5. an Infant newly born; and along with them, the separate pieces of the head of a Malagasse.

Mr. C. Telfair, the President, read some remarks on the growth of the *Polypiers* which compose the reefs of the island, offering subjects of such varied enquiries.

Mr. C. Hoart seeing the ardour wherewith experiments are being made on the fabrication of sugar, read a discussion in regard to two methods which he esteemed preferable to those in use.

At this sitting there was read, a report and analysis of the Proceedings of the Society during the past year, announcing among other things that more than 45 memoirs, notices, &c. &c. have been communicated to the Society, by the following authors, viz. Messrs. C. Telfair, Delisse, sen. W. Bojer, J. Desjardins, L. Bouton, Lienard (Father), H. Faraguet, Lislet Geoffroy, J. R. Barry, G. Longmore, E. Lienard, J. Lienard, J. Newman, and the late Dr. Lyall.

This sitting was distinguished by the presentation of the Bust of Baron George Cuvier, which arrived the evening before this Anniversary of his Birth-day, selected for holding the Annual Meetings of the Society.

The Society then proceeded to elect its Council by ballot, when the same members who have composed it since the formation of the Society, were re-elected; being the first five in the list of authors mentioned above.

Note.—We are under the necessity of deferring the continuation of these Proceedings, including the Annual Report and Analysis mentioned, where, in the latter, there is the following intimation relating to a subject mentioned in the proceedings, viz. the Dronte or Dodo, see p. 82.

Many of the Journals which have given an account of the report made on this subject by Baron Cuvier to the Institute, have committed gross errors. According to them it was among the bones of fossil tortoises sent from our island to this naturalist, that these fragments, to the number of six, were discovered, as it were accidentally, by the Baron Cuvier, and that they came from the Isle of France. The truth is, that these pieces were presented to Mr. Desjardins by Mr. Roquefeuil, who received them from Mr. Labritour, who discovered them in a cavern in the Isle Rodrigue in 1786.

N. B. By mistake of the Printer, page 1 of this Number is printed 9, and so in continuation.