origin to those who visited the coast for food, and not to those living close by. He mentioned the Digger Indians, and their mode of life. He did not think the writer of the paper wished to introduce the question of the origin of life.

Mr. Tregear said he hoped the remaining chapters of the paper would be read. It was a useful paper, inasmuch as it might induce others to write on these subjects, and afford further information. There were many things in the paper that he could not agree with, but he considered it most valuable and suggestive. The writer did not, he thought, intend to introduce any question as to the origin of life.

2. "On Kerns and Serifs"—two old and curious words much used by English printers—by R. Coupland Harding. (*Transactions*, p. 95.)

Mr. Tregear said Mr. Harding's paper was most interesting. He quite agreed with him in saying that Mr. Murray, in preparing his new dictionary, had no right to leave out, as he was doing, certain words which he considered not proper to appear. It quite spoilt the work for the purpose of reference.

Mr. G. V. Hudson exhibited a splendid set of drawings of New Zealand *Lepidoptera* which he had prepared to illustrate his new work on the subject. The drawings were greatly admired.

SEVENTH MEETING: *7th October, 1896.*

Mr. W. T. L. Travers, F.L.S., President, in the chair.

Papers.—1. "Further results, showing that Free Cyanogen does not dissolve or even attack Gold," by W. Skey. (*Transactions*, p. 576.)

Sir J. Hector said that, for delicate experiments such as these researches required, Mr. Skey laboured under great difficulties, as the Laboratory was not properly equipped for such investigations. The conclusions arrived at were very important.

General Schaw pointed out that the gold thrown down as described was considered by the author to be in an allotropic state, and its behaviour with cyanogen might be very different from gold in the ordinary state.

Sir J. Hector said the behaviour of gold finely intermixed with cellulose might be very different from free gold. He would like to hear what Mr. J. S. Maclaurin had to say on that subject, on which he had brought very high chemical training to bear.

Mr. Travers said the whole matter turned on the employment of the cyanide process for the extraction of ordinary gold. If the gold operated on by Mr. Skey was not in its common form the results would not have a practical bearing.

2. "Notes on Moa-bones in Gold-drift" (collected by Mr. Lukin in the Sherry River district, Nelson), by Sir J Hector.

Sir J. Hector said, from Mr. Lukin's notes it appeared that these bones were found at the base of a Recent river-gravel deposit 20ft. thick resting

on the denuded surface of a marlstone formation of Miocene age. The gravel was being worked by hydraulic sluicing, and the gold was chiefly found in the bottom layer, which also contained the bones. These were all in rolled or water-worn fragments, and, as they had a honeycombed structure, a considerable amount of gold had lodged in them, which the miners obtained by crushing and washing the bones. From his knowledge of the locality, he believed the gravel to be quite recent, and formed long after the lignite and auriferous gravels of Pleistocene age which occurred in the same district. The bones were probably of the species *Dinornis robustus*, and were as follow: 3 dorsal vertebræ; 1 sacrum; 2 fragments of tibias, of different birds; 1 fibula of left side; 1 ischium and acetabulum—left side; 1 ischium, right side; 1 ischium, right side of a smaller bird; 3 ribs; 1 fragment of sternum: so that probably several birds are represented in the collection.

Mr. Travers said he knew the locality. It yielded rich auriferous gravels that had been worked for the last thirty-five or forty years, but under great difficulties, owing to the absence of water, without incurring a large expenditure. Now he believed the property had changed hands, and £70,000 was to be spent in developing the field.

Mr. Hudson asked if moas were supposed to have had external rudimentary wings. He could not understand why birds should lose their wings because they did not require the use of them.

Sir James Hector replied that some forms of the moa had very small rudiments of a wing. Disuse led to the diversion of nourishment from any organ to other parts of the body that were used in excess. No doubt the development of the ponderous legs of the moa was effected at the expense of the blood-supply diverted from the wings. The interesting point was that in New Zealand there were not only many kinds of true *Struthionidæ*, which is a family in which the breast muscles for flight were not developed, but there were also many other families of birds that elsewhere had power of flight, but yet in New Zealand had lost that power and the mechanism required for it.

3. "Notes on the Vegetable Caterpillar," with specimens, by Mr. Charles Fitton; communicated by G. V. Hudson.

The author contributed a number of fine specimens of the dried caterpillars, and also a number of live ones, with notes as to their mode of occurrence; but these all proved to be of species that were well known not to be true vegetable caterpillars, the moth or imago state of which had still to be discovered.

Mr. Maskell wished to say only a few words, not about the specimens or the notes, but by way of a mild protest against the manner in which this subject, originally brought forward by him in 1894, had been ignored in favour of the discussions so frequently taking place as to this caterpillar itself. In 1894 he incidentally brought in this insect as an illustration, and only an illustration, of what he, and, as he gathered at the time, Sir J. Hector, Mr. Kirk, and Mr. Hudson also, considered a most important question—the assistance given to tree- and fruit-growers by certain fungoid organisms which killed injurious insects. That question had since been taken up very seriously in many other countries, but in New Zealand, because Sir W. Buller chose to raise what he (Mr. Maskell) said was a perfectly trivial and unimportant issue, the really important question had been obscured, and, although they had had this vegetable caterpillar constantly brought forward, nobody seemed to care for anything but the merest trivialities in connection with it. It was necessary to point out, in the interests of tree-growers in the colony, that