

APRIL, 1874.

The monthly evening meeting was held on Tuesday, the 14th April, M. Allport, Esq., V.P., in the chair.

The HON. SECRETARY (Dr. Agnew) submitted the following returns for the past month, viz. :—

1. Visitors to Museum, 1,357.
2. Ditto to Gardens, 2,910.
3. Plants received at Gardens :—From Messrs. Macfarlane—10 packets Seeds and 4 bulbs Lilies. From — Lidbetter, Esq.—Seeds of *Cedrus deodara*. From the Botanic Gardens, Lyttelton, New Zealand—One case containing 60 plants. From Mr. C. F. Creswell—18 packets Seeds.
4. Plants sent from Gardens :—To Mons. J. Linden, Ghent, Belgium—One case Tree Ferns. To Mons. J. Verschaffelt, Ghent—One ditto.
5. Times of leafing, flowering, &c., of a few standard plants in Botanic Gardens during March.
6. Books and Periodicals received.
7. Presentations to Museum and Library.

Meteorological Returns.

1. Hobart Town, from F. Abbott, Esq.—Table and Summary for March.

2. Westbury, from F. Belstead, Esq.—Ditto.

3. New Norfolk, from W. E. Shoobridge, Esq.—Table for March.

4. Melbourne, from R. J. L. Ellery, Esq.—Printed ditto for November, 1873.

5. Sydney, from H. C. Russell, Esq.—Ditto for December, 1873.

The presentations to the Museum and Library were as follows :—

1. From W. Chambers, Esq., Adelaide.—13 specimens of woods from Northern Territory of South Australia.
2. From Captain Harrison, of the "Waterwitch."—Two living specimens of the Moloch Lizard, (*Moloch horridus*) from Adelaide.
3. From Mr. Milford McArthur.—A "Flying Squid," (*Loligo sp.*)
4. From Mr. Daldy.—A hollow mass of Iron Ore, finely crystallized on the inside, from Hope Island, Port Esperance.
5. From Mr. Taylor, Kangaroo Point.—Fine specimens of Copper and Lead Ores from South Australia.
6. From Mr. Hissey.—6 Land Shells from the Solomon Islands Group, South Pacific.—An albino Rosella.—A Magpie from Victoria (*Gymnorhina leuconota*.)
7. From C. H. Grant, Esq.—Plant impressions from railway works, Glenorchy.
8. From Mr. Bilton, Glenorchy.—A mineral specimen.
9. From Dr. Agnew the following new books :—
 - a. "The Atmosphere," by Flammarion, edited by James Glashier.
 - b. "The Forces of Nature," by Guillemin, edited by Norman Lockyer.
 - c. "How to work with the Microscope," by Dr. L. Beale.
 - d. "Heat a mode of Motion," by Tyndal.
 - e. "Manual of Zoology," by Nicholson.
 - f. "Practical Hygiene," by Dr. Parkes.
 - g. "Manual of Metallurgy," by C. H. Makins.
 - h. "Manual of Mineralogy" (last edition) by Dana.
10. From the Entomological Society of Belgium :—12 vols. of the Society's publications.

11. From the Trustees of the Museum of Comparative Zoology, Harvard College, Cambridge, U. S. America :—"Illustrated Catalogue, No. 71, parts 1 and 2, with 49 plates. Revision of the Echini, by Alexander Agassiz." Reports of Trustees for 1871 and 1872. Note by Alexander Agassiz, on the application of photography to illustrations of Natural History, with two figures.

[Special attention was directed to this profusely illustrated catalogue, many of the photographs being exquisite as works of art, irrespective of their scientific value].

A letter was read from Dr. Haast, of Canterbury Museum, N.Z., returning thanks for his election as a corresponding Member of the Society. A second letter from Dr. Haast was also read in which the writer remarks "I shall not fail to get new specimens for you. Don't forget the Male Native Tiger—also a pair of Native Devils."

A paper was read by John Swan, Esq., M.H.A., on the culture of the Angora staple in Tasmania by breeding from the pure Angora, and common goat. Mr. Swan illustrated his paper by exhibiting a number of goat skins which shewed the result of "in and in" breeding for three generations between the pure Angora and its produce with the common goat. By the first cross the long coarse hair of the common goat and the fine Angora staple were produced in about equal proportions. In the last cross the common goat-hair had disappeared, and nothing was left but the long, soft, glossy and almost silken staple of the Angora. One skin, however, exhibited a very marked contrast to all the others. It ought to have been almost pure Angora, but on the contrary no trace of this blood was visible. It presented nothing but long, very coarse, and tawny coloured hair, differing in nothing from that of a common badly bred goat. Here it was evident that the efforts of the breeder had been set at naught by Nature, and the type of some remote ancestor had been reverted to. Instances of this kind are not unknown to breeders but the occurrence of such a very striking example must be rare.

The Secretary remarked that the following communications, which he proposed to read, had only been placed in his hands the day before. It would be noticed that they referred, by a singular coincidence, to the same subject which had just been brought under the notice of the meeting in so able and practical a manner by Mr. Swan :—

"22 Melville-street,

"11th April, 1874.

"My Dear Dr. Agnew :—I forward herewith a letter from the British Consul at Angora, which I wish you to lay before the Society—its publication may do some good. It was forwarded to me by Mr. Edwin Pears, L.L.B., late Secretary of the Social Science Association of England, but now a practicing barrister at Constantinople, formerly, as you know, master of the public school at New Town. I send you Mr. Pears' letter, all of which relating to Mr. Gatheral's communication you can make use of.

"Very truly yours,

"E. SWARBRECK HALL."

"2, Rue de la Banque, Constantinople,

"December 31st, 1873.

"My Dear Dr. Hall,—I know that some attempts have been made to introduce into Australia the Angora goat, which gives, as you are aware, the finest mohair; and I believe that these attempts have met with

a certain amount of success. How much or little I don't know. Quite recently, however, facilities have been offered for buying and exporting the goats, such as have not before existed. Even, therefore, if some few goats of the best breeds are now thriving in Australia, it might be advantageous to import a considerably larger number. I have had some conversation on the subject with Mr. Gatheral, the English consular agent at Angora, and have requested him to write to the Royal Society of Tasmania, and also to Melbourne and Sydney. He would himself be prepared to make arrangements for sending down the goats to Ismidt, less than a day's journey by boat from Constantinople. From Ismidt, or Constantinople, they might be shipped either direct through the Suez canal or to London. I have asked Mr. Gatheral, who knows the subject probably better than any other Englishman, to give particulars as to the goats, their habits, cost of feeding, the climate they require, and the annual value of their wool. From my own experience in this part of the world, I can at least add one fact. The inhabitants of these parts are so entirely barbaric, that if the goats required any special care or knowledge in their management, the breed must have been long since extinct. I should predict that under the treatment of such scientific agriculturists—as for example the late Mr. Kermode—an animal would shortly be produced whose annual return to its owner would be double what the present return is. From what I can learn, Australia would be better suited to the goats than Tasmania; but I believe that the district between Ross and Green Ponds would also be one in which they would thrive.

“Mr. Gatheral's position ensures his respectability, but beyond this I know from other sources that he is everywhere regarded as a man of high character; and that if anybody can be trusted to be successful in obtaining the goats of the true Angora breed, it is he. He is, among other things, the buyer of mohair for the greatest house in the world, that of Titus Salt, of Saltaire, which, if my knowledge of the geography of our county is not out, is not far from Leventhorpe Hall.

“While I am writing on the subject of what will be of use to the Australias, let me mention also tobacco. I know that you personally would probably say that the best use to which it could be applied would be to make a sheepwash, and that to consume it in the ordinary way is an abuse. But as Turkish tobacco is milder than the kinds used in Australia, even you, on the principle of choosing the least of two evils, would have reason to give it the preference. Turkish tobacco is of a remarkably fine character. In the London shops it commands a high price, and now that Englishmen are rapidly taking to the continental fashion of smoking cigarettes instead of pipes, the demand for it is steadily increasing. I know of no reason whatever derived from soil or climate, why the very best varieties of Turkish tobacco should not be produced in Australia. With the question of the excise duty to be raised from it I have nothing to do. But I can testify that the tobacco is good, and I believe that if it were once fairly introduced into Australia, the demand for the American varieties, as well as for cigars, would almost altogether cease. There are here English, American, French, Dutch, German, and other smokers, but all of them have practically abjured pipe and cigars, and taken to the Turkish cigarette. If in the interest of the colony I can supply any information to you or the Royal Society, I shall be happy to be of use, for the sake of many pleasant recollections of old times.

“Very sincerely yours,

“EDWIN PEARS.”

"Her Britannic Majesty's Consular Agency.

"Angora (*vid* Constantinople),

"31st December, 1873.

"Dr. E. Swarbreck Hall, Hobart Town, Tasmania.

"Dear Sir,—At the suggestion of E. Pears, Esq., I propose writing you with regard to some special products of Asia Minor, as I understand from Mr. P. that you take an interest in introducing the products of other countries into your own highly-favoured soil and climate.

"The products referred to, which could be easily and profitably transferred, are the mohair goat, Persian or yellow berries, gum tragacanth, and tobacco.

"*The Mohair Goat*.—From a very early date has been bred in this district, and has supplied an unrivalled staple, ranking next in value to silk itself. Several attempts have been made to introduce it into Europe, always resulting in failure, but of late years they have been successfully introduced into Cape Colony, California, and Melbourne. In all these places they thrive, in the latter particularly they promise ere long to increase more rapidly, and yield finer hair than they do in Asia Minor. Here they are tended in flocks of from 100 to 1,000 head mixed with the common goat and sheep. One shepherd has 80 to 100 head allotted him. During spring they browse upon the young leaves of a stunted oak common in the district, and upon the coarse tufted grass peculiar to most high lands. When all herbage is burnt up by the hot sun in summer, or the ground covered with snow during the short but severe winter, they are then fed with chopped straw and hay, and thrive thereon. The clip begins here in March. Kids produce 1½lb. weight; ewes, 3lb.; males, from 3 to 6lb., the average per goat being 2½lb. weight. 75% (seventy-five per cent.) of this is available, as what is called "Fair Average," in Bradford, and is saleable in that market at from 3s. to 3s. 9d. per lb., according to quality and market rate; 25% (twenty-five per cent.) being seconds and inferiors, worth from 9d. to 2s. 6d. per lb. At the beginning of winter the fleece becomes so heavy that the animals have to be partly clipped to enable them to walk. An average of 12oz. per full grown goat is obtained in this way, and because of its extra length is valued at 15% (fifteen per cent.) more than "Fair Average." The Turkish "rentchpayer" or grazier is, perhaps, the most ignorant and impracticable producer in the world. He persists in drenching the fleeces with water thus destroying the true lustre in order to make an extra profit out of the Christian merchants, who are his only customers; he is oppressed with heavy and constantly increasing taxation, and yet most of them not only make a living, but accumulate wealth. The reason is that the demand for the staple usually exceeds the supply, and were the trade once in the hands of British growers and capitalists, there is no doubt it would receive an immense development. The goats hitherto shipped from Asia Minor to the colonies, already referred to, have all been of the 'Kastambol' breed, a showy but inferior species, the reason being that that district is nearer the sea, and the original cost and outlay on the way are much lighter. The 'Angora' species, which is undoubtedly the *thorough-bred*, has not yet been exported. Were it thought desirable, I consider I am in a position to execute orders for the choicest Angora goats. The post I have the honour of holding as Her Majesty's representative here, and the fact of my buying goats' hair largely, for some of the most enterprising Bradford spinners, gives me every facility and advantage in dealing with the natives. At present prices the animals could be delivered at the ports of Enneboli Ismatt, or Constantinople for £5 (five pounds sterling) a head; delivered in London the additional expense, insurance, freight, &c., would bring the price up to £9 to £10

(nine to ten pounds sterling) according to cost of freight at the time. The inferior breeds referred to, could be obtained for much less money, but my calculation is for the best bred animals only.

"The usual mode in executing such orders is to open a credit for me with a London banker, with permission to draw, say a fourth, when the goats are bought, and the balance with documents, bills of lading, &c., attached when they are shipped.

"*Persian or Yellow Berries*.—Sometimes also called 'French berries,' or the '*Rhammis infectorius*,' of Linnæus, a species of 'buckthorn,' another article of export from this district, is the fruit of a hardy shrub, propagated from cuttings or seeds, and produces the fruit in two or three years. The bushes yield from 15 to 25 lbs. weight (fifteen to twenty-five pounds weight) annually, and require little or no cultivation. The crop is almost entirely gathered in by the women and children of the growers, so I have no data on which to calculate charges. Six individuals are expected to collect 20 cwt. (twenty hundredweight) in two to three weeks. The berries are worth from £7 to £8 per cwt. (one hundred and forty to one hundred and sixty pounds sterling per ton) in Liverpool, and are largely used by dryers, drysalters, calico printers, and others, producing as they do some of the finest yellow dyes known.

"*Gum tragacanth*, from the *Astragalus* plants, of which 150 varieties are indigenous to Asiatic Turkey. The varieties, '*Astragalus verus*,' and '*Astragalus gummifer*,' are the most valuable for producing the gum known in commerce and pharmacy, and worth at present £15 per cwt. (fifteen pounds sterling per hundredweight.) The bulbous root of the plant, when ripe, is cut a little above the ground, the gum exudes during the day, hardens at night, and is collected in flakes the following morning.

"*Tobacco Seeds*, from which the various qualities are propagated that have made Turkish tobacco famous all over the world, is another article of produce I could buy to advantage. The price varies very much, being sometimes as low as 10d. per lb. for the best qualities, and often as high as 2s. per lb.

"The causes that make such produce peculiar to, and especially successful in this district seem to me to be mostly atmospheric. The excessive dryness and lightness of the air are noteworthy. Little dew falls at any time, and from April to October it rains seldom. Given a corresponding elevation (3,000 to 3,500 feet above the sea-level) and a mean temperature of 42 degrees in winter, and 86 in summer, there seem to be no reason why the valuable products of this district should not be successfully transferred to other climates.

"Should any fuller information on these subjects be desired, I shall be happy to correspond with you. The addition of Constantinople to my address is indispensable as there is no direct postal communication with Angora, and

"I remain, Sir,

"Yours faithfully.

"GAVIN GATHERAL, H.B.M.C.A."

After some discussion it appeared to be the sense of the meeting that the introduction of the pure Angora goat by any one who had opportunities of managing the flock properly, could not fail to be a most profitable undertaking. It was also thought that the cultivation of the Turkish tobacco might be tried with very good prospects of success, although in the opinion of some of the Fellows, the heat of the climate was scarcely high enough to ensure perfection in the plant.

A vote of thanks having been passed to Mr. Swan and the donors of presentations, the meeting separated.

MAY, 1874.

Owing to the inclemency of the weather, and the consequent small attendance, it was agreed to postpone the proceedings until the next monthly meeting.