averages for the eight years 1856-57 to 1863—64 and for the two years 1883-84 and 1884-85

|  |  |  |
| --- | --- | --- |
|  | 1856-7 to  1863-4. | 1. 4, 2. 5. |
|  | Loads. | Loads. |
| From the British coast provinces, Pegu and Tenasserim.. | 22,675 | 44,228 |
| From Burmah by Sitang and Irrawaddy rivers | 6,890 | 66,663 |
| From Shan states, Karenni, and Siam, by Salwin river.... | 55,491 | 163,751 |
| Total supplies | 85,056 | 274,642 |
| Exports by sea | 76,763 | 153,192 |
| Local consumption in Rangoon and Maulmain.... | 8,293 | 121,450 |

Of the quantities exported, between 38,000 and 65,000 loads@@1 have gone beyond India during this period, the balance having been sent to Calcutta, Bombay, and other Indian ports. The quantities here stated do not include the timber consumed in Upper Burmah, nor that brought from the forests drained by the Menam and Mekhong rivers on the east side of the Indo-Chinese Peninsula, nor the teak produced in Java and the other islands of the Malay Archipelago, and in the extensive forests of the western peninsula of India. No data are yet available for a precise estimate ; but the total amount yielded by these forests, and consumed locally or exported, appears to be not less than 500,000 loads or tons a year.

In British India a large portion of the teak-producing tracts have since 1856 been placed under conservancy management, and similar measures will doubtless be extended to the forests in Upper Burmah, now annexed to the British empire, as well as to the forests of the feudatory native states. In British India, the area of state forests demarcated in order to be permanently con­served@@2 was in 1885 (in round figures) 33,000 square miles, and the teak-producing tracts included in this area may be estimated to cover about 12,000 square miles, or 7,680,000 acres. Large additions will be made to this area, especially in Upper Burmah. Of teak plantations, 12,000 acres have been formed in Burmah, 563 acres in Coorg, 3436 at Nilambur in Malabar, and about 2000 acres in other districts. There are good grounds for estimating the future yield of plantations at the rate of 50 cubic feet (one ton) per acre annually. The natural forests will, in their present impoverished condition, not furnish more than one cubic foot per acre annually, but, as protection against fire is gradually extend­ing, the proportion of teak is everywhere being increased by cultural operations in the forests, and the effect of these measures will eventually manifest itself by a considerable increase in the yield. In their present condition, the natural forests demarcated in India up to 1887 may be expected to yield 150,000 tons a year, while the produce of the plantations will eventually add 18,000 tons more. The teak forests in Java were surveyed in 1871, and their area was found to be 2280 square miles, while the plantations in that island in 1880 amounted to 24,710 acres. These figures will serve to show that, if the system commenced in India and Java is maintained, there is no reason to apprehend a diminution of the teak supply. (D. BR.)

TEAL (Old English Tele), a word of uncertain origin, but doubtless cognate with the Dutch *Taling* (formerly *Talingh* and *Telingh),* and this apparently with the Scandi­navian *Atteling-And* (Brünnich, *Ornithol. Borealis,* p. 18) and *Atling,* which it seems impossible not to connect with the Scottish *Atteile* or *Atteal,* to be found in many old records, though this last word (however it be spelt) is generally used in conjunction with Teal, as if to mean a different kind of bird ; and commentators have shewn a marvellous ineptitude in surmising what that bird was.

The Teal is the *Anas crecca* of Linnæus, and the smallest of the European *Anatidæ,* as well as one of the most abundant and highly esteemed for the table. It breeds in many parts of the British Islands, making its nest in places very like those chosen by the Wild Duck, *A. boscas* ; but there is no doubt that by far the greater number of those that are taken in decoys, or are shot, during the autumn and winter are of foreign origin. While the female pre­sents the usual inconspicuous mottled plumage of the same sex in most species of *Anatinæ,* the male is one of the handsomest of his kind. His deep chestnut head and throat are diversified on either side by a line of buff, which, springing from the gape, runs upward to the eye, in front of which it forms a fork, one prong passing backward above and the other below, enclosing a dark glossy-green patch, and both losing themselves in the elongated feathers of the

hind-head and nape. The back and sides of the body appear to be grey, an effect produced by delicate transverse pencillings of black on a dull white ground. The outer lanceolate scapulars have one-half of their webs pure white, forming a conspicuous stripe along the side of the back. The breast is of a pale salmon or peach-blossom colour, each feather in front bearing a roundish dark spot, but these spots lessen in number and size lower down, and the warm tint passes into white on the belly. The tail-coverts above and below are velvety black, but those at the side are pale orange.

The Teal inhabits almost the whole of Europe and Asia,—from Iceland to Japan,—in winter visiting Northern Africa and India. It occasionally occurs on the western shores of the Atlantic ; but its place in North America is taken by its representative, *A. carolinensis,* the male of which is easily to be recognized by the absence of the upper buff line on the side of the head and of the white scapular stripe, while he presents a whitish crescentic bar on the sides of the lower neck just in front of the wings.

Species more or less allied to these two are found in most other parts of the world, and among such species are some (for instance, the *A. gibberifrons* of the Australian Region and the *A. eatoni* of Kerguelen Island) in which the male wears almost the same inconspicuous plumage as the female. But the determination of the birds which should be technically considered “ Teals, ” and belong to the subgenus *Nettium* (generally misspelt *Nettion*)*,* as distinguished from other groups of *Anatinæ,* is a task not yet successfully attempted, and much confusion has been caused by associating with them such species as the Garganey (vol. x. p. 80) and its allies of the group *Quer­quedula.* Others again have not yet been discriminated from the Wigeons (*q.v.*)*,* the Pintail-Ducks, *Dafila,* or even from the typical form of *Anas* (*cf.* Duck, vol. vii. p. 505), into each of which subgenera the Teals, *Nettium,* seem to pass without any great break. In ordinary talk “ Teal ” seems to stand for any Duck-like bird of small size, and in that sense the word is often applied to the members of the genus *Nettopus,* though systematists will have it that they are properly Geese. In the same loose sense the word is often applied to the two most beautiful of the Family *Anatidæ,* belonging to the genus Æ*x* (commonly misspelt *Aix)—*the Carolina Duck of North America, *Æ. sponsa* (not to be confounded with the above- named *Anas carolinensis* or *Nettium, carolinense),* and the Mandarin-Duck of China, *Æ. galericulata.* Hardly less showy than these are the two species of the subgenus *Eunetta,—*the Falcated Duck, *E. falcata,* and the Baikal Teal, *E. formosa,—*both from eastern Asia, but occasionally appearing in Europe. Some British authors have referred to the latter of these well-marked species certain Ducks that from time to time occur, but they are doubtless hybrids, though the secret of their parentage may be unknown ; and in this way a so-called Bimaculated Duck, *Anas bimaculata,* was for many years erroneously admitted as a good species to the British list, but of late this has been properly discarded. (a. n.)

TECHNICAL EDUCATION. The special education, the object of which is to train persons in the arts and sciences that underlie the practice of some trade or pro­fession, is technical education. Schools in which this training is provided are known as technical schools. In its widest sense, technical education embraces all kinds of instruction that have direct reference to the career a person is following or preparing to follow; but it is usual and convenient to restrict the term to the special training which helps to qualify a person to engage in some branch of productive industry. This education may consist of the explanation of the processes concerned in production, or of instruction in art or science in its relation to in­dustry, but it may also include the acquisition of the manual skill which production necessitates. The term technical, as applied to education, arose from the necessity of finding a word to indicate the special training which was needed in consequence of the altered conditions of

@@@1 Of the teak exported to foreign countries from India in 1883-84, 27,356 tons went to Great Britain, 8594 tons to Egypt, 2056 tons to Ceylon, 1984 tons to Japan, and 1823 tons to the Cape of Good Hope. The total quantity exported was 46,471 tons.

@@@2 Not including 16,000 square miles of second class reserves in the Central Provinces.