

few jars, such as are used to keep preserves, a barrel of about fifteen or twenty gallons, and a supply of whisky and alcohol. These may be kept in a cool place, a cellar, or a sheltered recess, ready to receive the fishes. The smallest fishes are best kept by themselves in jars, and the larger ones in a barrel. The barrel ought to be put upon one head, the other removed and used as a cover. It will be well to see that the fishes are placed in it in as natural a position as possible, that is to say, stretched out with the fins closed against the body, or at least not unnaturally bent. It is equally desirable to exclude specimens the fins of which are bruised, and the scales rubbed off, unless they be rare species. When the fishes are too big to be stretched across the barrel, they may be gently bent upon the flatter side, and if too stiff to allow this, put in, head foremost, in an upright or slanting position, and then slightly bent against the sides of the barrel. It is useless at first to pour more alcohol over the fishes than is necessary to cover them. While cruising at sea, it will be well to throw some rags over the specimens to prevent their jarring, until the vessel in which they are contained is quite full and headed up. Of the smaller kinds of fishes, at least a dozen of each would be required for a full and satisfactory examination. Where they may easily be caught, more would be very acceptable. Of those of medium size, about half that number; and of the larger ones, as may be most convenient, one, two, or three. It will secure a better state of preservation, and afford fuller means of study if a cut is made into the belly of the larger fishes, to allow the alcohol to penetrate into the intestines. At all events, these ought never to be removed. The knowledge of the local names is very desirable. To rectify the errors of nomenclature now spread over the whole country, the simplest way of recording the name of a fish is to write it with a black, hard pencil upon a piece of stiff paper, or with indelible ink upon cloth, and to place such paper under the gill-cover of the specimen to which it belongs. Specimens too small to be labelled in that way may be rolled up in a piece of cotton cloth upon which the name is written. Delicate fishes, with very deciduous scales, would keep better if they were wrapped up singly in this way in cloth. Any other notices respecting the habits, uses, &c., of such specimens may be preserved in the same manner, or referred to a No. inscribed upon the label of the fish. It would be very important to record as far as possible the date at which the specimens preserved were caught. This may often enable the anatomist to determine the spawning season of the species. Also, the depth at which they are known to live. Should any collector be sufficiently familiar with painting to draw coloured figures of any of these fishes, or so situated as to have some of them drawn by an artist, it would be an invaluable contribution to Natural History.

When collections have to travel over great distances, or to be for many months on a journey, it is desirable that every specimen should be wrapped up singly in a piece of cloth; but this is not necessary, generally speaking, for collections which are likely to be taken care of after a short journey.

Those unaccustomed to making collections may occasionally suppose from their smell that they are spoiling, the mixture of alcohol with dead animal matter being rather disagreeable; but unless there is actual putrefaction, no apprehension need be had respecting the safety of a collection, and the removal of decayed specimens is all that is required for the preservation of the remainder, provided the alcohol has the necessary strength of at least twenty-eight degrees of Beaumé, or .88 specific gravity. To avoid losses, it is prudent never to use kegs of more than twenty to twenty-five gallons, save in exceptional cases, where very large and highly valuable specimens are to be preserved. As a general rule a twenty-five gallon keg will contain any desirable specimen collected even in our largest rivers, there being always an opportunity now and then to obtain a moderately large specimen of our

largest fishes, which when full grown are at any rate too bulky to be preserved in alcohol. Upon small watercourses, or small ponds, an ordinary jar may be sufficient to contain complete separate collections of their natural productions. Of very large fishes, especially of sharks and skates, the skin may be preserved, leaving the whole head attached to it, and rolled up, preserved like other specimens in alcohol. A longitudinal cut upon one side, in preference the right side, will afford sufficient facility for removing the intestines and all the flesh and bones of the body. Skeletons would be also very desirable. To obtain them it is simply necessary to boil the animal, either whole or in part, and to gather and clean all the bones, and preserve them together in a sack. A naturalist will readily put up the loose parts in their natural connexion.

Extracts from the First Report of the Secretary of the Board of Registration and Statistics on the Census of the Canadas for 1851—52.

The returns of a population Census acquire their chief utility from being contrasted with those of former periods, as from this comparison we learn the increase or decrease of the population, the annual rate of such variations and the proportionate relation of the two sexes. From these results as it has been said, "we approximate to something like a Law of Population, or to certain natural rules, the infraction of which must be due to particular and perhaps removable disturbing causes." It has been found that although the population of Great Britain has increased upwards of ten millions during the last half century, yet throughout this period, the sexes have presented their relative proportion, viz.: 30 males to 31 females.

Until the Abstracts of the personal census are completed, it will be impossible to do justice to this most interesting feature of the census. A few general remarks must at the present time suffice, and our chief attention be directed to the agricultural produce and prospects of the country.

It is believed that a very general feeling prevails, not only in the Mother Country but even in Canada, that her growth and prosperity are not commensurate with that of the United States, and without any inclination to deny or conceal the rapid progress of our neighbours, it may be well by a few facts, compiled from statistical returns, to prove how erroneous such an impression is—the growth of Upper Canada, taking it from the year 1800, having been nearly *thrice* that of the United States.

According to the "World's Progress," a work published by Putnam, of New York, in 1851, page 481—the free population of the United States was in 1800, 5,305,925; in 1850, it was 20,250,090, (in 1810 it was 7,239,814,) thus in 50 years its increase was not quite 400 per cent, whilst that of Upper Canada was upwards of 1100 per cent, for the 40 years from 1811 to 1851.

Comparing the last decade of Upper Canada with that of other countries, exclusive of Australia and California, we arrive at the following result:

The total number of inhabitants in the United States, on the 1st June, 1850, according to the census report, was 23,263,488, but it has been shown that the probable amount of population acquired by territorial additions should be deducted in making a comparison between the last and former census. These diminish the total population of the country as a basis of comparison to 23,091,488.

United States—Census of 1850..23,091,488

" 1840..17,067,453

Increase in 10 years.. 6,022,035 or 35.27 per cent.