

EPHEMERA, OR DAY FLIES.

These insects belong to the family which is scientifically called Ephemeroidea. They are called day flies on account of their short life, a single day sometimes witnessing their entrance into a perfect state of development and their death. They pass about two years in their larval and pupal state.

These insects are interesting and remarkable for a stage of development which is very uncommon. When they forsake the water where their larval and pupal state is passed they creep out of the pupa case, and after resting for a short period—from one to twenty hours—begin a tremulous motion of their wings. Then they fly to the trunk of a tree or to the stem of some water plant, and cast off a thin membranous skin which has enveloped the body and wings; and fly quickly away before the eyes of the observer, leaving this skin resting upon the stem, looking at first like a dead insect. After this operation the wings are much brighter. The state between leaving the water and casting off the skin is called "pseudimago."

These day flies were known to the ancients. Aristotle says "that about the time of the summer equinox he observed on the shore of one of the rivers which empties into the Bosphorus, little sacs, from which insects would creep out and fly about, until evening, then grow weary and die at the setting of the sun. They were called on this account day flies."

On a quiet May or June evening these insects may be seen flying about, sometimes in great numbers, their gauze-like wings irradiated by the rays of the setting sun. They fly without any visible motion of their wings, and seem to drink in joy and pleasure in the few hours which lie between their appearance and disappearance, their life and death.

They measure from 17 to 19 millimeters without the tail filaments, which in the female are of the same length of the body, but in the male double the length.

The larvæ inhabit the water, and have upon each side of the back part of the body six tufts or tassels; the head runs forward into two points, and has fine hairy feelers; the legs are smooth, the front ones the strongest and adapted for digging. They are fond of hiding under stones or burrowing into the sandy shores, and make a very curious tunnel, something like a double barreled gun, which is often fifty-two millimeters deep.—From *Brehm's Animal Life*.

The Seal Islands of Alaska.

The seal islands are a mere group of rocks, situated in Behring Sea, enveloped in fog during one-half of the year and shrouded in snow the other half. There are two seasons at the seal islands—the humid and the frigid. During the humid season there is no sun visible, nor is there darkness, for this print might easily be read at any hour of the night, without artificial light, in what is there accepted as summer. But during the humid, foggy, long day season, there is not a moment when the roar of seals may not be heard for a mile at sea off the coast of those islands. During the frigid season the days are cut very low in the neck and quite short in the skirt, so that they would hardly be worth while mentioning were it not

for the exceedingly emphatic weather, which drives the seals away to sea, and makes itself felt even by the oleaginous natives; and a gale howls all the time. During the frigid season the surf never ceases to whip itself into foam upon the shores. And yet those rocks are cheap at \$7,500,000. If we should advertise them for sale at \$10,000,000—allowing ourselves a profit of \$2,500,000 on the purchase of Alaska—they could be sold.

The islands in question were called by the Russians the Pribylov group—so named in honor of their discoverer, who was cruising around about one hundred years ago in search of sea otter, which were then found to be almost as scarce but not quite so dear as now in the Aleutian chain. The Pribylov group consists of the islands of St. George, the most southerly and the first discovered. St. Paul, Otter Island, and Walrus Island. A few seals haul out upon Otter Island, but none upon Walrus Island. The seals killed by the lessees of the islands are all taken upon St. Paul and St. George. The maximum number for St. Paul is 75,000 seals each year; for St. George, 25,000; making altogether the full quota of 100,000 seals per annum.

The seals begin to land there about May 1, unless prevented by ice, and the killing (except for food) does not begin before June 1, by which time they are there in thousands. By July 1 there are millions of seals upon the two islands—doubtless four millions upon St. Paul, and a million upon St. George. Literally, they are in countless numbers. They are estimated by counting all those lying within a well marked small section of the breeding grounds and then measuring the entire space of the "rookery," as it is called, after they all leave later in the season, and allowing a given number to each square yard or rod. This is the only process by which the number of seals resorting to the islands can be approximated. "Seal fisheries" is not only a misnomer, but it is absurd when applied to the mode of taking skins.

When skins are wanted, the natives walk to the "rookeries," crawl along the sand until they arrive in a line between the seals and the water, then spring to their feet, yell and flourish clubs simultaneously, and the selected victims, destined for sacrifice upon fashion's altar, stampede up the beach, and on started, are driven like sheep to the slaughter. They

usually dies a painless death, after receiving the knock down blow. The work is divided; some men knock down, some stab, and some draw knives around the neck and flippers and along the belly, so that the skimmers have only to separate the skin from the blubber. All the men employed in this work are natives. The skimmers are experts, with such professional pride as prohibits dulling their razor edged knives upon the outside of the skin, which contains more or less sand from the drive.

All the time of the knocking down the seals in the main drove sit on one hip like dogs, panting, growling, and steaming, but apparently not interested in the fate of their friends dying before their eyes, nor caring for what may befall themselves. They do not seem to be at all sensitive on the subject of death. They can be driven up to and over the warm, bloody carcasses which cover the ground, without manifesting any concern whatever. The skins are taken off with wonderful rapidity by the natives, and with very few cuts or slashes. As soon as the skins are cool, or at the end of a day's killing, they are hauled to the salt house and laid in bins, the flesh side up and salted. In the course of a week they are taken from the bins and examined. Those in which the curing process has not been perfected have more salt applied to the pink spots, after which they are again packed in layers to await the bundling process, which takes place at any convenient time after the booking.

The system with which the work is pursued has been reduced to such an exactness that, though the season begins after June 1, generally not before the 10th or 12th, the one hundred thousand skins are sometimes aboard the vessel for shipment to San Francisco by July 25, and always before August 1. Neither King Solomon nor the Queen of Sheba—no, nor the lilies of the field—ever wore richer raiment than the modern seal skin cloak; but when the skin is taken from the animal to which nature gave it, when it goes into and when it comes out of the salt, or when it is first sent to market, it is not what it appears later upon fashion's form.

Before the fur seal skin becomes the valuable article of commerce which goes into the manufacture of a fashionable garment, it is shaved down on the flesh side until it is not much thicker than a sheet of letter paper, the long, coarse hairs must be plucked out, and the fur dyed; it may be a brown or almost black according to the prevailing taste, which now runs to darker hues than formerly. The raw skins are sold at trade sales in London before they take on their artificial hue, the greater portion of their cost to the "consumer" being added after their purchase at the sales. Returning them to this country, paying duties, and the expense of making them into garments, constitute the major portion of the final cost.—*Overland Monthly*.

Chinese Fishermen.

The Chinese and Japanese exhibits at the International Fisheries exhibition must be novel and striking. An article in *Nature* calls attention to the extraordinary ingenuity displayed in utilizing the most ordinary and unpromising objects for the purpose of fishing.

Thus in Swatow they employ a boat drawing a few inches of water, with the rail nearly level with the surface. A narrow plank fixed along one side is painted white, and the light of the moon falling on it causes the fish to mistake it for water. They jump over the plank into the boat, when they get entangled in moss or grass. At Ichang, a wild animal, such as the otter, is trained, not to catch fish, but to frighten them into the net; while at Ningpo cormorants are regularly and systematically trained to fish. These and many other devices shown at the exhibition mark the Chinese as the most ingenious and accomplished fishermen in the world.

The Postage Reduction.

There has been a good deal of squibbing in the newspapers because, after October 1, it will cost as much to send a letter around the corner as it will to send it to San Francisco. But one thing at a time.—*Tribune*.

And the next thing is the quick delivery of letters in cities and towns. More benefit can be secured to the public by the prompt delivery of letters than by the reduction of postage.



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pull themselves along as one might expect a dog to travel with his forelegs broken at the knees and his spine over the kidneys. For locomotion on land, the fur seal depends mainly on his fore quarters, the hind flippers being dragged along. At sea, the hind flippers serve mainly as steering apparatus, though they have some propelling power, being twisted like the propeller of a screw steamer; but the fore flippers perform most of the propulsion in the water as well as on land.

The hair seal, on the contrary, derives more propelling power in the water from his hind than from his fore flippers. The seals on St. Paul and St. George Islands are often driven two or three miles from the "rookery" to the killing ground adjacent to the warehouse where the skins are salted. The killing is easy enough after the seals are once arrived at the ground selected for the slaughter. Suppose one thousand seals to be driven up, forty or fifty are cut out from the large drove. The smaller group is moved a few rods away from the others, and then knocked down by men with hickory clubs five feet in length. Being knocked senseless, the seal is quickly stabbed to the heart, and gen-