

# ODD FARM PRODUCE THAT CRAWLS OR JUMPS OR FLIES

## Butterflies, Ostriches, Snakes, Frogs, Alligators, Sponges and Sea Gulls Cultivated.

In Bexley, one of the ancient suburbs of London, is to be found one of the oddest of farms—one for the raising of butterflies. The owner started it about eight years ago, and has been so successful that he has had several imitators. These farms contain oaks, sycamore trees, plum trees, cacti, castor oil plants and other plants the leaves of which serve as food for the caterpillars. Cocoons are hatched on branches protected by gauze, and are kept in a room until after the first moult, when they are placed in the bushes in the open air and protected from birds by coverings of muslin or tulle.

The owner of the Bexley farm has about two hundred different species of butterflies and moths in all stages and conditions. The most costly but, really among them is the purple emperor, or king of the forest, so named because it is usually to be found flying over the top of the oak trees, and consequently is most difficult to catch. A male specimen of this insect is worth \$1 and a female \$1.25. The prices of the ova, larvae and pupa which he sells vary, of course, according to the species. For instance, a dozen of the ova of the drifter, a common moth, can be purchased for five cents, while the same quantity of ova of the comma butterfly would cost six times that amount. Then, again, a dozen of the larvae of the small tortoise shell costs but eight cents, while a dozen rannock sprawlers could not be purchased for less than \$5 or \$6. The pupae are sold at a painted lady, each pair of scalloped hoods for 25 cents for the scarce burbled brass.

### REPTILES FURNISH VENOM AND OIL.

Several of the farms which have been started since the one in Bexley devote most of their attention to the rearing of rare genera of the Euphrasia, the silkworm family. They have, by crossing, obtained some new varieties, which are sought after by museums of natural history. They are also endeavoring to acclimatize in France species of silkworms indigenous to other countries.

Snake farming would not appear to be an attractive occupation, but it has more than one vantage in the Australian "serpents," the most successful farm being in the neighborhood of Sydney. Around the farm are scattered large bottomless cages, placed on the grass, with some bush on one side and a small pond in the center. When in the open a bit of bush shelter is indispensable for snake and frog alike. The cages are covered with small mesh wire netting. A little bran or straw, and occasionally a few old rags, are placed in each cage.

The snakes are caught in the bush, a work frequently involving many miles of wandering and long hours of patient watching, for the snake is a suspicious creature, generally more alarmed at the sight of a man than the man is at seeing it. The snake hunter employs a couple of forked sticks as a means of capture. With one the reptile is pinned by any part of its body to the ground, after which it is fixed by the neck with the other stick, and while thus helpless can easily be picked up by the neck between the thumb and first finger and dropped into a bag.

The principal business of snake farm owners is the supplying of venomous snakes to various institutions throughout the world which are engaged in trying to discover an antidote for snake bites. The method used with these snakes is to "milk" them. This is done by feeding them well for some time and then putting a glass, similar to a watch glass, covered with the finest gutta percha, into the cage. The infuriated reptiles bite viciously through the gutta percha, leaving tiny drops of poison on the prepared glass. Sometimes the venter does the "milking" himself and ships the venom to various parts of the world. The quantity obtained from any one specimen is very slight, since its value is great. It must be handled with extreme care, as it retains its poisonous qualities for years. In addition to the snakes, the Aus-

tralian farms also raise large numbers of frogs and toads.

A farmer near Shawnee, Okla., is breeding rattlesnakes for commercial purposes, his purpose being to kill the snakes when they become well grown and sell their oil, which is quoted at about \$1 to an ounce. The skins also bring a good price, being tanned and used in making slippers, belts, bags, purses, card cases, jewel boxes, dressing table accessories, etc. He now has three tons of rattlesnakes on his farm and expects to enlarge it this year.

### PLANS TO "BURBANK" GULLS' EGGS.

An old retired sea captain, who lives on the Oregon coast, is now engaged in preparing a seagull farm. His attention was first attracted to the matter by noticing the demand for seagull eggs. They are not so delicate as hen's eggs, having a slightly fishy taste, but they are wholesome and nutritious, and many thousands of them are consumed annually. The prospective farmer believes that if the gulls were kept in confinement awhile and properly fed, their eggs would be as good as hen's eggs. He proposes to fence in a piece of land along a slough, including a section of the slough, and to confine there as many gulls as he can procure, and believes that in a little while they will become tame and can be treated the same as barnyard fowls.

At Los Angeles and Jacksonville, Fla., are to be found large farms devoted exclusively to the raising of ostriches. Both of these farms have proved very profitable, and they are the show places in their respective cities. The feathers from these farms command an even higher price than those obtained from the wild birds.

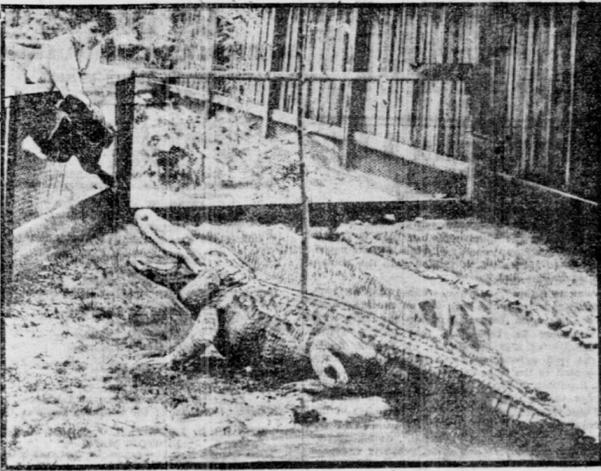
In Bath, England, is a kangaroo farm, which was established there a few years ago by an enterprising Australian. This farm lies on a high hill and is entirely surrounded by lofty stone walls, the different species of kangaroo being separated by strong wire fences. Comfortable and substantial houses have been built for the animals, and they are fed twice daily with crushed corn, hay and cabbage leaves, besides the grass which they find for themselves. As much as \$100 is paid for an adult specimen and from \$25 to \$50 for a "joey," as the kangaroo baby is called. The animals are captured in Australia, either in traps or by running down with dogs.

Water-farming, which was practically unknown twenty-five years ago, is now important. All along the American coast lines are to be found numerous oyster farms, which are cultivated as assiduously and intelligently as are our land farms. The oyster farms produce annually a product valued at millions of dollars and furnish remunerative employment for thousands of persons. The cultivation of clams and scallops is also carried on at a few places in New England and on Long Island.

### FROG FARMS LIKELY TO INCREASE.

Throughout the country are scattered a few frog farms, and it is extremely probable that as the food value of this batrachian becomes better known the farms will materially increase in number. In making a frog farm several natural ponds are selected, if possible. Around these ponds are constructed and the ponds are roofed over with coarse wire to keep out the birds and animals which prey upon the frogs. The natural increase of the pond inmates is supplemented by the capture on the outside of as many additional ones as possible, which are placed in the ponds. As soon as young ones are born they are removed to what is known as the "nursery pond," as otherwise they would be gobbled up by the larger frogs.

No attempt is made to confine the frogs until near the time for shipment to market. They are then taken alive at night, with the aid of a torch and a dip-net, and confined in small pens that can be drained when the frogs are desired for market. Only the hind legs, skinned, are marketed. The rest of the animal's flesh is edible, but as three-fourths of the flesh is on its hind legs the



FEEDING A LIVE DUCK TO AN ALLIGATOR ON A SAURIAN FARM AT HOT SPRINGS, VA.



HE RAISES FALCONS TO SELL TO SPORTSMEN.

remainder is not sufficient in quantity to bother with.

Odd animal farms are those for alligators. At Hot Springs, Ark., and the other at St. Augustine, Fla. The former is located on a small mountain stream which was at one time a lake. The ponds, which are made use of for breeding grounds and stock yards. In order to prevent the

alligators from eating each other the ponds are divided into a number of inclosures by means of heavy wire netting, and in each compartment alligators of about the same size are placed. Here they are fed on dogs or tanned meat. The females are robed of their eggs as soon as laid, these being placed in an incubator for hatching. As soon as hatched the babies are placed in a separate inclosure to prevent their elders from eating them.



PLUCKING A BIRD ON A CALIFORNIA OSTRICH FARM. (From stereograph, copyright, by Underwood & Underwood, New York.)



"PUPS" ON A FOX FARM IN MAINE.

Alligators grow slowly, so that one two feet long is at least fifteen years old, and one twelve feet long may be anywhere from 75 to 150 years old. Some are supposed to attain an age of more than 200 years.

As alligators lie dormant during the colder part of the year winter quarters have to be prepared for them. These are in a long, low building divided into many compartments. Each compartment contains a pool of water through which run pipes so that the water can be kept at a steam pipe so that the water can be kept at a constant temperature. One small pond sometimes contains 200 or 300 alligators in this dormant condition, piled on top of one another like so many sticks of firewood. Hundreds of baby alligators are sold every year to patrons of the baths, who send them to friends throughout the country. Replicas of larger size are sold for use as advertising novelties and for exhibition purposes, while large numbers are killed, stuffed and mounted. The teeth are carved into many curious shapes and sold as jewelry, while there is considerable demand for the eggs.

### CULTIVATING THE TERRAPIN.

At Crisfield, Md., and in North Carolina and Georgia, diamondback terrapin farms are in operation. At Crisfield the farms are constructed by fencing in a large tract of marshland. The interior of this is then divided into a number of compartments containing the terrapin in order of their size. Then ponds and canals are dug, so that the terrapin may be free to swim from one compartment to another. The inmates are fed twice a week with bushels of crabs and fish. Large sand beds are constructed where the female may lay their eggs, to be hatched by the heat of the sun. These beds are examined frequently, and the young terrapin are removed as soon as possible after being born. At this stage the young are perfectly soft, and it takes a number of days for the shell to harden.

### CASTING TO ENTERTAIN EDUCATORS.

Castine, Me., July 3.—Castine is to entertain the American Institute of Instruction next week, on its seventy-ninth annual convention, and several

hundred well known educators from all parts of the country are expected to enjoy the beauties of the Maine coast. Extensive preparations for their entertainment are being made. The following week the Maine superintendents of schools are to meet for a week in convention here.

The dome of the Rock Hotel, which was completely destroyed by fire a few weeks ago, will not be rebuilt this season, but a temporary dining hall for a number of the guests in the village. The United States cruiser Montgomery will be at Castine over the Fourth.

### GAYETY AT BAR HARBOR

Season Promises To Be a Merry One at Maine Resort.

Bar Harbor, Me., July 3.—The present summer at Bar Harbor is remarkable for the number of persons who are here for the first time. Among the newcomers are the Craig Biddies and the Paul Denckla Milnes, who have come to Bar Harbor from Newport; Mr. and Mrs. Frank Samuel of Philadelphia; Mr. and Mrs. John B. Trevor, J. N. Bonaparte, of Washington; Mr. and Mrs. George S. Peterson, of Philadelphia; Mr. and Mrs. Henry D. Burnham, Mr. and Mrs. Henry C. Emmet, of New York, who have Philip Livingston's cottage, Silver Birches, and dozens of others. A number of the families who were here last season and took prominent parts in social life, like the Sidney Keiths, the W. H. Forces, Mr. and Mrs. John T. Pratt, Mr. and Mrs. F. B. Keech and others, will return, and the season is expected to be a gay one.

The first golf tournament of the season took place on Saturday, while fixtures have been announced for every Saturday morning in July and August for the cup offered by Mrs. George S. Robbins. Women's putting competitions will occur on Monday afternoons in August, with the Boston Symphony players in attendance, and other enjoyable features. For special fixtures there are the tournament between teams from the visiting Eastern Yacht Club and a team from its members and guests of the Kebo Club, which is expected to bring forth some sharp competition, a cup being given by George S. Bowdoin, of New York, to the winning team; the annual match for the Kebo, Mount Desert and Penicook cups, given by Mrs. J. Tilton Bowen, of Chicago; W. Butler Duncan, of New York, and J. L. Kesterlin, of Philadelphia; play for the Gross score medal, and the Kebo trophy, given by David E. King, of New York, to the three times winner of the Kebo Cup and now held by Hamilton Briggs; the President's cup match on August 31 and the club medal stroke competition on Saturday, September 4. Catering to the growing popularity of tennis, the club will hold tennis tournaments on Monday, July 26, in mixed doubles, and on Tuesday, August 19, in men's singles for a cup offered by Henry Lane Esq., of New York.

Next Saturday comes the meeting at which the town will vote whether or not to exclude automobiles from the island. Most of the summer residents, cottage and hotel guests are behind the movement.

# HAS NEW YORK MANY WALKING PESTHOUSES?

## Human Beings Who Go About Immune but Spreading Disease Germs.

"New York has many walking pesthouses."

The startling statement, in effect, was made by Dr. Daniel Sargent, superintendent of the Health Department, to a Tribune reporter last week. That is to say, the metropolis is infested with peripatetic disease carriers, human beings of both sexes who are quite healthy and normal in the usual way, but who while pursuing their daily vocations disseminate the microbes of dangerous maladies.

They defend themselves from the diseases which they harbor and unaware of the havoc which they cause, these human carriers of germs are responsible for many outbreaks of sickness which seem to be of mysterious and unaccountable origin. Epidemics of typhoid, diphtheria, cholera and dysentery are largely due to innocent and healthy "conveyors," who are a greater menace to any community than bomb throwers and Black Hand letters.

"If you know who they are, why don't you get after them?" asked the writer.

"We don't know, and we don't want to know," was the surprising answer of Dr. Bensen. "I don't think this is a subject that we want publicity on. We don't want to investigate it. It looms up too large."

The case of Mary Mallon, or Typhoid Mary, which is now in court on habeas corpus proceedings—the objects to the Health Department keeping her in solitary confinement on North Brother Island—is our classic example. It is enough to know about her.

"How could you isolate the rest?"

"We would not put them all! Mary Mallon is taking up valuable space in the Riverside Hospital building, and last season cost the city \$100,000 and expense in the two years of her detention. To capture all the disease conveyors and confine them for the period of their natural lives is too big a proposition to contemplate. The department is trying to handle anything like that."

"But why do you shut up public? Isn't it worth while to warn people of the danger?"

"A warning will hardly do any good," was the reply. "You can't warn the victims, for they have no means of identifying those who give them disease. It might be slightly useful to warn the germ carriers, whose suspicion of their state has been confirmed by bacteriological examination. They would be careful for a while not to infect others, taking such precautions as washing their hands and so on, but this would not last long. They would get careless and would relax precautions. It is not human nature to look after the welfare of others when your own welfare is not at all concerned. It is true that the danger is much greater in some occupations than in others—in a cook, for example, as was Mary Mallon, of course. She was a cook and directly conveys germs to her victims. A truck driver would be comparatively safe, but we could hardly compel him to stick to that trade and not become a cook. The supervision of occupations is an extensive programme."

"Is there no cure for the germ carrying condition?"

"Nothing positive. Sometimes a surgical operation for the removal of the gall bladder, which is a special breeding place of microbes, effects a cure. Drugs have been tried, but I fear that a drug sufficient to kill the germs in the body of an immune subject would kill the subject, too. Typhoid fever and tuberculosis are our worst conveyed diseases. Their germs multiply and multiply with unabated virulence in the systems of humans for many years. The same is true of diphtheria. Diphtheria persists for periods ranging from a few weeks to four or five months after the apparent recovery of the patient. We know that very infectious disease is communicable for a

limited period after the patient is apparently well." Dr. Simon Flexner, head of the Rockefeller Institute, in an article in "The Popular Science Monthly" for July, speaks of the intermittent and constant presence of disease germs in the human system. He says:

"The intestinal mucous membrane supports a rich and varied bacterial flora, among which are several potentially harmful species, and sometimes, even under conditions of health, the bacilli of typhoid fever, of dysentery and in regions in which cholera is endemic or during its epidemics, of cholera. In making a frog farm several natural ponds are selected, if possible. Around these ponds are constructed and the ponds are roofed over with coarse wire to keep out the birds and animals which prey upon the frogs. The natural increase of the pond inmates is supplemented by the capture on the outside of as many additional ones as possible, which are placed in the ponds. As soon as young ones are born they are removed to what is known as the 'nursery pond,' as otherwise they would be gobbled up by the larger frogs.

No attempt is made to confine the frogs until near the time for shipment to market. They are then taken alive at night, with the aid of a torch and a dip-net, and confined in small pens that can be drained when the frogs are desired for market. Only the hind legs, skinned, are marketed. The rest of the animal's flesh is edible, but as three-fourths of the flesh is on its hind legs the

Dr. Thomas S. Southworth, in a paper read before the eighteenth annual meeting of the American Pediatric Society, told of a Brooklyn youngster under two years of age, and not known to have typhoid, who gave a fatal dose of the disease to his mother, infected two sisters and then, being taken to live with a New York family, communicated the disease to three children of that family. The infant typhoid carrier was finally taken to a hospital and a specimen of his blood was reported by the Health Department to show "a positive Widal reaction, thus proving him to have had typhoid fever at some time in the past." Dr. Southworth said:

"Since the establishment of the Royal Institutions for Bacteriological Research, which have taken up the study and control of typhoid in certain districts of Germany, evidence is rapidly appearing of cases of typhoid by person to person contact, who are now technically spoken of as 'bacillus carriers.' These are defined as those whose excreta contain the bacilli after ten weeks from the beginning of the illness, or from the beginning of the last relapse. Lentz, at Trier, discovered twenty-two typhoid carriers, to seven of whom contagious cases of typhoid were traced. A Besserer and J. Jaffe found typhoid bacilli from four persons who had had typhoid three months, six months, four years and seven years previously. Seige, also, who states that 'contact infection' from these cases is coming more and more into prominence, reports two especially interesting cases in which mothers having had typhoid and living together under circumstances which apparently precluded reinfection, infected their children two years and ten years later. Furthermore, V. Drigalski and Conradi have demonstrated the bacilli as coming from four persons who remained entirely well after exposure to typhoid. Such reports, which are being multiplied, suffice to encourage the belief that contagious cases of typhoid may yet be devised may show that the bacilli persist even less exceptionally than is now believed, their persistence being due either to chronic infection of the gall bladder or to intestinal conditions . . . offering a favorable medium for their growth."

The infectious character of many urines during and after typhoid is well established. Many investigators have worked in this field. Thus far it would appear that typhoid bacilli may be found in about 21 per cent of the cases. . . . Richardson's conservative statement is that they may persist for weeks, occasionally for months, rarely for years. . . . When present, the bacilli are usually in pure culture and enormous numbers. Petruschky, previously quoted, estimated them in one case to be 172,000,000 in one cubic centimeter."

These bacilli also persist in pus for a year or more, and in the sputum of patients having a complicating bronchitis or pneumonia. Seven weeks is the longest period recorded in the latter case. . . . It is stated that typhoid carriers may give the disease by coughing and sneezing. Some germs are found in perspiration. European observers discovered that 3 per cent of 1,782 cases examined were typhoid carriers.

The story of the capture of Mary Mallon, or Typhoid Mary, the medical detective who was involved in establishing her standing as a champion typhoid disseminator—twenty-eight cases in her record—almost excitingly interesting. "Typhoid Mary" gave the disease to all kinds of persons of high

and low degree, millionaires and fellow servants, in the years that she roamed abroad as a walking pesthouse. A good cook and a willing worker, the healthy families who at one time lived in her kitchens had no reason to suspect that she was bringing death and disease in her wake and was more to be dreaded than a professional poisoner or homicidal maniac. Mary herself could have had no idea of her gifts. If she had known and been inclined to profit from them, she might have obtained remunerative jobs from revolutionists, who would have assigned her to act as cook for the "Czar of Russia" or the Sultan of Turkey.

### A PHYSICIAN AS SLEUTH.

Dr. George A. Soper, of this city, who was the Sherlock Holmes in the case, got on the trail of Mary Mallon in the winter of 1906, when he was summoned to investigate an epidemic of typhoid in the home of a New York banker at Oyster Bay. Six persons of the household of eleven were taken ill between August 27 and September 3 previous. No other cases had occurred in Oyster Bay anywhere near this time, making the affair all the more mysterious. Dr. Soper set to work running down all possible clues, just as would be done by a criminal investigator. He studied the milk, the water and the food, as being the probable sources of infection.

He found the milk supply was the same as that used by most other people in the village, who kept well. Therefore, milk was exonerated. The drinking water, which was pumped from a well, was analyzed by chemists and pronounced pure. A special test of the water was made by pouring fluorescein in closets, cesspools, vaults, and so on, to see whether contamination could enter the well water. No trace of fluorescein could be detected in the well water after this test. A stationary water tank was next examined and shown to be blameless. Suspicion then fell on soft clams which were taken from places polluted with sewage. But the clams proved an alibi for themselves, since they had not been eaten within six days previous to infection—too long a period for the disease to incubate.

The supplies of vegetables and fruits were scrutinized without result. The history of the house was studied, and it appeared there had been only one case in thirteen years previous to the epidemic. A hypothesis that the infection occurred during the absence of the patients from the house was shattered by the fact that none had been away from the house for several weeks previous to their illness. It added to the mystery that the social position of the sick ones differed so greatly. Among the first to be attacked were a daughter of the family and two maidservants, one of them a negro. Then came the wife, another daughter, and then the gardener, who was a resident of the town.

Having exhausted all his clues, the baffled medical detective doubtless felt like putting up the mystery to old-fashioned Providence. However, his investigations had established one thing—a common cause for the common result. He began to meditate upon a seemingly trivial fact—that the family had changed cooks on August 4. An ordinary physician while conceding that a change of cooks might cause nervous prostration, would not have dreamed that it might cause an epidemic of typhoid fever. But Dr. Soper was just then keen on insignificant and even absurd details. He reflected on the fact that about three weeks before the typhoid epidemic broke out an old family cook had been discharged and replaced by a new one, of whom little was known. She was hired through an employment bureau and stayed but a short time, leaving some three weeks after the outbreak of typhoid. She was a tall Irish woman of about forty, in seemingly good health, and her name was Mary Mallon.

The scent was growing warm. Dr. Soper would have exclaimed "Eureka!" if he had known what

he would discover later, but he kept quiet and went after Mary Mallon. He found her with difficulty. For some reason she refused to tell her history or to permit an examination. The physician nevertheless obtained her history and found all his suspicions amply confirmed. Cases of typhoid had occurred in seven out of eight families in which she had worked in the last ten years.

The first record of Mary's involuntary devastation was in 1900, when she was employed in New York. A young man visitor to the family was attacked with typhoid in September, and it was thought he got it from a previous visit to the soldiers' camp at Montauk Point, Long Island. But since the patient had lived in the Mamaroneck house at least ten days after visiting the camp, he could not have contracted the disease from the soldiers. Mary, the cook, left within a few days after the development of this case. She had been in the family for three years, without apparently being connected with typhoid.

In 1901 Mary lived about eleven months in one family in New York, and a month after her arrival conveyed the disease to a landlady.

### MARY "STILL ON THE JOB."

In 1902 a New York lawyer, with four members of his family and five servants, went to Dark Harbor, Me., for the summer. Seven persons were soon ill with typhoid, besides a trained nurse succumbed and also a woman doing day work in the house. The other two persons who escaped were the cook—Mary Mallon—and the lawyer, who had had typhoid some years before. Well known medical men vainly puzzled over this case. The drinking water, obtained from a spring, was analyzed by chemists in Boston and New York and pronounced pure. There were no other cases of typhoid in the house. The house was new—and it couldn't be rented after the outbreak.

In 1903 a New York family, spending the summer at Sands Point, Long Island, had an outbreak of the disease. One week after the family moved there four servants out of seven fell ill. Dr. R. L. Wilson, of the New York Health Department, looked into the case and suspected the landlady—Mary Mallon—but could not get satisfactory evidence against her. The water was analyzed and all sorts of expert investigations were made in vain.

In 1905, after the Oyster Bay episode, Mary got a job at Tuxedo Park, N. J., staying for a month in the fall. Two weeks after her arrival a landlady was taken ill. This was the only case of typhoid in Tuxedo in a year.

In 1907 two cases of typhoid occurred in a New York house where Mary was employed. One patient was a chambermaid and the other a daughter of the house, who died on February 23, 1907, the only fatal case in the cook's arrival and the first cure of these cases. On investigating the first case the Health Department officials ascribed it to the public water supply.

Dr. Soper laid the above facts, which he discovered their place to a certain extent.

At several places on the Florida coast the United States Bureau of Fisheries has for some years been conducting experiments to determine the feasibility of raising sponges from clippings. Natural sponges are gathered at various places and brought, under water, to the prepared grounds, where they are cut into small pieces, which are tied to the poles and racks placed in the water. Sponges of a commercial size have been grown from these clippings, and within a few years the business will probably be taken up on a large scale.

Thus the champion typhoid carrier was captured and exiled to North Brother Island—and the department does not want to look up the others like her for fear that it would take several islands to hold them all.