

The Farmer's Advocate AND HOME MAGAZINE.

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DOMINION.

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students of the future are under no illusions as to the peril that would await America and human freedom should the alliance of Germany, Austria and Turkey prevail or secure a draw. For months there has been unprecedented activity in the United States naval and military quarters, and there is unquestionably a strong movement under way for increased armament. In Canada, to meet the immediate duty of the hour, military organization is accelerated and munition industries created with a natural tendency to perpetuate themselves. The easy theory that the one course ahead is for each nation to meet the military preparedness of its neighbors means the forging of a still heavier yoke for men's necks, by turning the world into a camp and withdrawing multitudes from productive industries like that of the farm. What guarantee can we have that preparedness will frighten other nations into letting us alone? Optimism is good but obviously nations cannot go on spending about \$15,000,000 a day for perhaps years, destroying property and lives without having to face a day of reckoning. The chairman of the New York Clearing House, a far-seeing banker, sums up the situation by saying that the war has stimulated the demand for almost everything America has to sell, for it has diminished European production of everything except dead men. He might have added munitions. We shall see in the end about a dozen impoverished nations and even neutrals adversely affected. Poor men are not good buyers. There will be temporary inflation and then reaction, as the burdens fall due. Evidence is already coming to light from returned rank and file soldiers, the heroes of the fields of France, that like the toilers at home they will become missionaries for some better and more sensible way of conducting this world's affairs than by burning and butchering. The mad militarism of Germany and her perfidy has staggered faith and made the future task hard, but once justice is done as it must be,

at whatever cost, there is hope for humanity that death and devastation will create a revulsion of feeling and a demand for opening a new page. Men have a right to ask for it, and they will as the time draws on. What answer will statesmen give them? Civilized society, the world over, has succeeded in creating a body of law supported by public opinion, which, when we consider the weakness and vagaries of men, fairly well protects life and property through courts and if need be by policemen, giving effect to its collective will. Is it beyond nations to do something similar? Little nations like individuals have a right to live, do business and enjoy themselves. Dr. James B. Scott, an eminent American international lawyer, says the principle has been adopted by the nations of the world in the postal union, and he suggests as feasible a sort of judicial union and international court to recognize rights and settle disputes if need be, as a last resort by commercial pressure, non-intercourse or other methods of giving effect to public opinion. The Hague Tribunal did not avert the war, but by the time it has run its terrible course the nations, Germany included, will wish the job had been entrusted to the Hague men for settlement and be ready for the adoption of some more rational plan than the one forced on the world.

Nature's Diary.

A. B. Klugh, M.A.

The chief agents in keeping in check the great insect host are insects themselves. We are prone to think of birds and man as being the most important factors in preventing too great an increase in insect life, but while both are decidedly active agents in this respect the main all-important and constantly effective check is the parasitism by other insects. Most of these parasitic insects belong to the Hymenoptera, the same order to which the bees, wasps and ants belong.

There are a great many species of these parasitic Hymenoptera, but the general life-history of one of these insects is as follows. The winged female searches for the special host species in that stage, egg or larval, on or in which the eggs are to be laid. This host may be an individual of a particular species or may be one of any one of several, usually closely allied species. The hosts represent most of the insect orders, although caterpillars of moths and butter-

flies as soon to overcome and almost extinguish locally the host species, which of course means starvation for the parasite and a new lease of life for the host.

The parasitic larvae feed upon the host in two ways, some species taking up the lymph of the host both through the skin and by the mouth, while others attack the solid tissues such as muscles and fat. In the case of the latter species their attacks avoid the vital organs as otherwise the host would be killed long before the parasitic larva was ready to pupate.

One family of these parasitic Hymenoptera is that made up of the Ichneumon-flies, and one of the most striking members of this family may be found in our forests. This insect, which is known as *Thalessa lunator*, is shown in our illustration, which depicts it in the act of boring into a tree with its remarkable ovipositor. This species parasitizes the Pigeon Tremex, an insect that bores into elms, oaks and maples and deposits an egg at the end of the holes which are half-an-inch deep. The larvae which hatch from these eggs burrow into the heart-wood of the tree. The body of the female *Thalessa* is two and a half inches long and the ovipositor is about five and a half inches in length. When she finds a tree infested by the Pigeon Tremex she selects a place opposite a Tremex burrow, and, elevating her long ovipositor in a loop over her back, with its tip on the bark of the tree, she makes a derrick out of her body, and proceeds to drill a hole. When the Tremex burrow is reached she deposits an egg in it. The larva that hatches from this egg creeps along the burrow until it reaches its victim, then fastens itself upon it and destroys it by sucking its blood. When the larva of *Thalessa* is full-grown it changes to a pupa within the burrow of the host and the adult when it emerges gnaws a hole out through the wood and bark.

THE HORSE.

If the colt didn't win it is not his fault, but his owner's. Likely he was not bred right or trained as he should have been.

It will take money to feed the horses this winter but what else can be done? It never pays to starve any of the live stock.

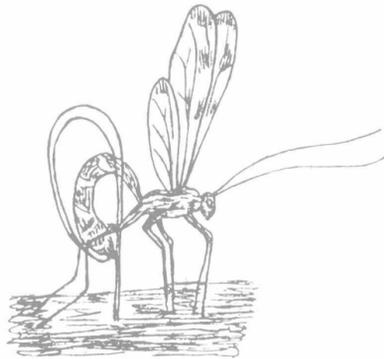
The only way to avoid losing money on horses when market conditions are as draggy as they now are is to find work for the horses.

Horses' Feet.

The cavalry branches of most armies pay due attention to the horses' feet. The veterinary officers realize that, if they wish to keep horses sound on their legs, they must see to it that their feet are all right. Persistent inspection, skilful shoeing, careful trimming when necessary—even toes shortened a little when so prescribed—it is all an essential part of the program. And it pays. Good feet will keep a horse going for a long time, and, in the event of a man's life being dependent on the animal's speed and endurance, it is important that he should not be handicapped in that way. Everything ought to be just as it should be, and it is as well to remember that constant and persistent care and attention are necessary to achieve the object indicated. A little slackness may do a lot of harm. Nor is an ordinary blacksmith less efficient in his work if he performs it occasionally under intelligent direction and supervision. He is excellent, as a rule, and thoroughly conscientious, but nobody is the worse for mental stimulus administered by others.—Live Stock Journal.

Carelessness is Dangerous.

There is a bigger danger, at the present time, that the horse business in Canada will suffer from careless breeding than from the fact that importations are practically cut off. Prices are low and many over-stocked horsemen are a little discouraged. In such a time there is a tendency toward carelessness, on the part of the mare owner particularly. He may not feel like paying out a high fee to insure his mare but at the same time he may not care to allow her to go barren for a year, so he breeds to the five-dollar or eight-dollar type of horse and gets a colt which is in every particular a misfit, unsaleable at any price and a bill of expense. The good horse is the only horse to patronize at any time, and more particularly when horses are slow sale. In such times the only horse to find a market is the best of his kind. It would be well for all mare owners to exercise more care than ever before in their breeding operations, and for all those contemplating the purchase of a stallion for use in 1916 to buy nothing but a good horse. The scrub must not be allowed to increase in this time of depression in horse breeding.



Thalessa Lunator, Drilling.

flies furnish the greater majority. On the surface of the body, or more rarely, inserted beneath the surface of the skin, the parasite deposits one or several eggs. The footless, maggot-like larvae soon hatch, and if not already inside the host's skin, very soon burrow into it. Here they lie, feeding on its body tissues, growing and developing until ready to pupate. They may now eat their way out of the enfeebled and probably dying host to pupate in little, silken cocoons on the body of the host or elsewhere, or may pupate within the body. In the latter case the issuing winged adults have to bite their way out.

While as a rule each parasite confines its attacks to a single host-species there are numerous exceptions; and on the other hand the host itself may be attacked by more than one parasitic species. For example the American Tent Caterpillar has been found to be attacked by twelve species.

The parasitism of insect pests brings about the cycles of abundance and scarcity of these pests which are so noticeable. It is obvious that in the face of a scarcity of host individuals the dependent parasitic species are bound to find difficulty in maintaining themselves, and conversely, that with the increase of the host in numbers the parasites also increase rapidly. So rapidly do the parasites often increase in a given locality