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N. B.-Contributors are requested to send in their contributions written legibly in ink on one side of the paper only.—Editor.

The Insectary.

It is a well known fact that insects loom largely in the activities and operations of the present day agriculturist. We say present day agriculturist, because we have heard many a—gray haired old man assert with that characteristic pride that in those good old days there were very few insect pests affecting crops. Very often insects play such an important part in the economy of the farmer as to seriously upset the even tenor of his peaceful life. A flight of locusts or an attack of swarming caterpillars during a season, means either partial starvation or ^{terrors} of all ^{kind} of wretchedness or both to the small holder and nat it is h^{ere} looks to the Economic Entomologist for help ^{and} ^{as} such it becomes incumbent on everyone who professes to be an Economic

Entomologist to be conversant with the measures for checking the depredations of various insects affecting crops. The number of known insects is legion and the damage many of them do is of various kinds. This means that different kinds of insect enemies have to be treated in different ways, just as different varieties of human ailments have to get different methods of treatment. Thus, before any control measures are formulated, it becomes necessary to note which kind of insect is responsible for each different kind of damage, and having known these, we devise ways and means to check their ravages. It is needless to state that, in prescribing methods, it is always essential to remember, that such measures alone would commend themselves to the public, as can be shown to be both practicable and comparatively economic. To put it more clearly it is found that in the case of various insect pests there are certain habits and stages in their life—histories which often give us important clues to help us in devising control measures—these may be called the weak or vulnerable points in their lives. Thus it is often quite easy to exterminate certain insects at particular stages and extremely difficult to tackle them when they pass on to another stage. It is the duty of the Economic Entomologist therefore to study the lives and habits of different insects in detail and among others to discover those weak or vulnerable points and then suggest remedial measures to his agricultural clientele. In this work an *Entomologist* **Mes** an important part.

Recent visitors **M.** the Agricultural College and Research Institute Coimbatore,—including many members of the Union—might have noted a small building

somewhere about the north-western portion of the College Farm. From its outward appearance—provided as it is with a number of windows and glass roofing at the sides—it might perhaps appear to the uninitiated as a glass house for growing special kinds of plants. It is, however, not a plant house but the *Insectary* or Insect house.

The building which is in charge of the Government Entomologist has been constructed with the idea of making it suitable to breed and bring up insects as far as possible amidst natural conditions. Provision is made to afford plenty of light and ventilation at all seasons and to bring temperature and moisture to approximate outside conditions (as much as possible). Inside the building are some big enclosed pits filled with soil; insects which pass a season in a particular stage in the soil are left here for future observation. In addition to this are a few large cages which are enclosed by wire gauze walls and covered above with glass roof. Besides the important fittings are work benches and shelves for keeping small cages containing different insects under observation. Around the building are numerous small plots of a variety of crops to serve as food materials for the different kinds of insects that are studied in the insectary. In fact the Entomologist welcomes insects to the particular plots as thereby he may be able to study them side by side in the field and in the insectary. Complete and careful records of all observations are maintained and these records, it is hoped, will form a valuable fund of information to help the Entomologist in his work.

It may be asked whether it is not possible to study insects in the fields and whether an Insectary is necessary. The answer, naturally, is that it is not possible to study insects in the field and keep under observation different kinds of insects for a pretty long time. Under field conditions it becomes impossible to study a good many of the minute details which might often help us in devising control measures. Supposing something new appears in the cold weather; with an insectary it is possible to study it through and get an outline of its life history before summer, when perhaps it might appear in numbers in the fields. Supposing again we wish to breed generation after generation, say perhaps, from one pair it is entirely impossible under field conditions. Again, to study and demonstrate to students the habits and life stages of insects which often appear hundreds of miles away, the insectary as a safe place to bring and breed them affords excellent facilities. Of course, it is possible there may be differences in the conditions in captivity and field conditions, but as surroundings inside the insectary are made to approximate outside conditions as far as possible these differences become almost negligible in many cases.

Although some work in the life history and habits of some important insects has been done in the Entomological laboratories till now, it has not been possible to make detailed studies, and the work was done under great many disadvantages. Since the Insectary came into working condition it has been possible to do a good deal of substantial work in the study of the life histories and habits of many important insects. It may be noted that many a little

known fact regarding well known insects, was elucidated only since the inception of the Insectary. It may be added, in conclusion, that this is the second of the kind in India the other being in Pusa.

It is perhaps clear from the above account what an Insectary is and how it attempts to help the department and through it the agriculturists at large.

***The Kangayam Cattle.**

The cattle in this district are either hill breeds (malaimadu: Alambadi and Burghurs) or Kongu-madu: plain breeds (nattumadu Kenganad) or Kangayam cattle. The Kangayam cattle are well known for their excellent qualities for draught purposes. The breed is highly valued and centres round Kangayam whence it is named. These are bred in the whole of the Dharapuram Taluk and the adjacent parts in the Erode, Palladam, Karur, Palani and Dindigal Taluks. The breed in its purest form is found in the herd of the Pattagar of Palayacottai the like of which cannot be seen anywhere else in the Kangayam tract. By a careful selection of heifers and sires for many years he has improved the size and the quality of the breed. He is the most extensive breeder in the Kangayam tract, so much so his animals are designated as "Pattagar's breed." It is very difficult to find another in this Presidency who pays so much attention or carries out the systematic cattle breeding as the Pattagar of Palayacottai.

There are two varieties of the Kangayam cattle: large and small. Both the varieties are found side by side in the Kangayam tract. The biggest sized animals are found only with the Pattagar of Palayacottai and it is incorrect to say that he is the breeder of the small variety.

*Extract from the paper read by Mr. P. N. Md. Miran Sahib, B. A., Revenue Divisional Officer Erode, before the College day and Conference on 11th July 1915.