

contain from one to four orange colored lice, many very minute shining,

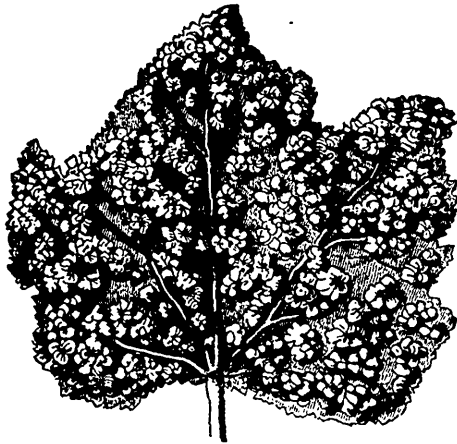


Fig. 14.

oval, whitish eggs, and usually a considerable number of young lice, not much larger than the eggs and of the same whitish color. Soon the gall becomes over-populated, and the surplus lice wander off through its partly opened mouth on the upper side of the leaf, and establish themselves either on the same leaf or on adjoining young leaves, where the irritation occasioned by their punctures causes the formation of new galls, within

which the lice remain. After a time the older lice die, and the galls which they have inhabited open out and gradually become flattened and almost obliterated; hence it may thus happen that the galls on the older leaves on a vine will be empty, while those on the younger ones are swarming with occupants.

These galls are very common on the Clinton grape and other varieties of the same type, and are also found to a greater or less extent on most other cultivated sorts. They sometimes occur in such abundance as to cause the leaves to turn brown and drop to the ground, and instances are recorded where many vines have been defoliated from this cause. The number of eggs in a single gall will vary from fifty to four or five hundred, according to the size of it; there are several generations of the lice during the season, and they continue to extend the sphere of their operations during the greater part of the summer. Late in the season, as the leaves become less succulent, the lice seek other quarters and many of them find their way to the roots of the vines, and there establish themselves on the smaller rootlets. By the end of September the galls are usually deserted. In figure 15 we have this type of the insect illustrated; *a* shows a front view of the young louse, and *b* a back view of the same; *c* the egg, *d* a section of one of the galls, *e* a swollen tendril; *f*, *g*, *h*, mature egg-bearing gall lice, lateral, dorsal and ventral views; *i*, antenna, and *j* the two-jointed tarsus.