

pound in 6 gallons of water, may be used instead of Black Leaf 40, but should not be combined with lime-sulphur. It is almost useless to spray after the leaves have become curled because it is then impossible to hit all or nearly all the aphids.

RED SPIDERS (*Tetranychus bimaculatus*).—Red Spiders are mites that feed on the under surface of the leaves of numerous plants. They have sucking mouth parts and cause currant leaves to become brownish or reddish-yellow in color and therefore unhealthy in appearance. Such leaves in dry weather, when the plants need them most, dry up and die. The mites have the habit of spinning a very fine web on the undersurface of the leaves, beneath the protection of which they feed and lay their eggs. Red Spiders are not all red, as one would expect; frequently most of them are a pale green or nearly transparent whitish color. They can just be seen with the naked eye. The eggs are like little glistening drops of dew. The spiders winter in the soil around the base of the plants.



FIG. 22.—Currant leaves curled by aphids. (After Close.)

Means of Control.—If lime-sulphur is used for the various spray applications mentioned above and the under surface of the leaves is well covered there will be little trouble from this pest. Wet weather also helps to control it, as the mites thrive best in dry seasons.

SAN JOSÉ AND OYSTER SHELL SCALES.—Currant bushes frequently, and gooseberry bushes sometimes, are severely attacked by either the San José or Oyster Shell Scale. If no remedial measures are taken the former of these insects will soon kill affected plants, and the latter will weaken them and occasionally cause their death. For a full description of the appearance and habits of these insects see Bulletin No. 219.

Means of Control.—Prune the bushes out well so that every part can be thoroughly sprayed and use lime-sulphur, specific gravity strength 1.032 to 1.035 (commercial lime-sulphur 1 gallon to about 8), a little while before the buds burst. Very badly infested bushes should receive two applications before the buds burst.

Many other insects and diseases attack currants and gooseberries in Ontario, but as they seldom do much damage it has not seemed desirable to give an account of them here.