

all a squirrel's long leaps are taken from a higher to a lower elevation, and I have observed that Adjidomo will not attempt a long leap except under these conditions.

#### RESTING.

During the hottest weather of the summer he rested more than at other times of the year. He selected a shady place on a large limb and stretched himself out at full length.

#### SUNNING.

Last winter I was somewhat puzzled by the squirrel's fondness for a perch which did not strike me as particularly comfortable—on a large nail in the trunk of the tree to which a clothes-line is attached. This perch was not used during the summer, but with the return of colder weather he again frequents it, and it is now plain that he takes up his position there because he is then sheltered and gets the full afternoon sun.

In connection with the squirrel's use of this perch a little episode occurred for which I can offer no explanation, but which caused us some annoyance. One day when the line held its full quota of clothes the squirrel cut it through at the point where it was attached to the nail, with somewhat disastrous consequences to the "wash". Subsequently he again cut the line down when it was empty, but since then he has left it intact.

#### LISTENING.

I have noticed that the squirrel has two attitudes which are assumed in intent listening. If it is on "all fours" it folds one front paw, nearly always the right, and places it against its breast. If it is sitting up it folds both front paws and brings them together against its breast. In both cases the head is elevated and is often turned from side to side.

#### PLAYING.

This squirrel is at least three years old, how much older I do not know, but it frequently plays. When the first snow-fall came it plunged about in it, dashed through the deep piles on the large limbs and evidently enjoyed itself thoroughly. It frequently goes through a remarkable performance which we must classify as a game, since it certainly serves no useful purpose. At the top of the trunk of the maple at the point from which the main limbs are given off there is a trough-shaped, vertical cavity, some eighteen inches long with a pocket-shaped bottom. The squirrel gets in this cavity, turns over and over in a series of somersaults, sliding down the trough on his back at each backward turn. He sometimes seizes his tail and rolls about in the pocket holding on to it.

#### EXPRESSION OF EMOTIONS.

The emotions of the squirrel are expressed mainly by attitudes, more rarely by the voice. Surprise, fear, curiosity, anger, contentment, all have their

characteristic attitudes. The attitude of surprise is either one in which the animal draws itself back on its haunches and allows both forepaws to hang from the sides, or else picks up first one fore-paw and then the other. In fear the body is flattened, head dropped, tail straight out. Anger is shown by the stamping of the hind feet, and jerking of the tail, sometimes by the stamping of the front feet as well. In curiosity the neck is stretched out to a surprising length. In the attitude of contentment the animal is usually sitting up with the tail flat along the back and the tip over the ears. These emotions are well-defined but as to whether joy finds expression in behaviour I have not yet definitely determined, though I have noticed a certain high bounding which it exhibits only when it has discovered a supply of food.

The voice seems only to be used in anger and pain. The scolding chatter is familiar to everyone, but I have observed that Adjidomo has chattering notes of different quality which he employs apparently in different degrees of anger. A cat excites his most intense wrath, and when he sees one anywhere near the base of the maple he breaks out into a very loud, sharp chatter of such a quality that I can now tell at once the cause of his indignation. It takes him some considerable time to get over a fit of cat scolding, and it is interesting to notice the order in which the different vocal elements which compose the compound chatter die out. The note which persists the longest is the little nasal "Tscherk", and these gradually grow fainter and further apart until his equanimity is restored. The chattering is always accompanied by stamping of the hind feet, which action sometimes is so violent as to become a veritable dance. It might perhaps be claimed that the chatter denoted only excitement and not anger, but this is disproved by the fact that he can get very excited without chattering and that upon three occasions when he has had cause for anger but not for excitement he has chattered. One of these episodes I will mention as typical. I had put two very hard buns out for him. He had some difficulty in getting a firm grip on one of the buns with his teeth because of its hardness and large size, but finally made off with it. He ran up the branch from which he jumps to the roof of the next house, gathered himself together and sprang across. But in mid-air the bun slipped and fell to the ground. The slipping of the bun upset his leap, but he managed to alight safely, though far from gracefully. He then looked over the edge of the roof after the bun, "registered surprise", (as they would say in the movies), and then chattered and stamped. He soon returned for the other bun, again had a struggle to grip it, carried it up the branch as before, and jumped—with the same result, the bun slipping from