and Great Quittacas. Park by the reservoir gatehouse on the dike. Departure can be made by returning to Routes 18 and 105 and heading north.

While season and weather conditions can obviously affect a trip to the Bridgewater - Lakeville area, it is well worth the time spent any time from mid-October to mid-winter in search of the species described above. Why not try inland birding for a change?

Migratory Free-loaders

The following article is by Wayne Hanley in Nature's Ways, a publication of the Massachusetts Audubon Society.

Airline passengers are not the only ones traveling in luxury to Miami for the winter.

The hippoboscid flies are making the trip, too. Some hippoboscids (pronounced hip-po-BOS-sid) will make it all the way to southern Argentina to languish in the warmth of the southern hemisphere summer. But, what is more important, the whole hippoboscid bunch will make the trip without flapping a single wing. Good thing, too, because some hippoboscids have become such parasites on birds, or bats, that they no longer bother to grow things.

It may sound odd to call an insect which does not fly, a fly. Especially since its cousins among the flies are aerial artists. But hippoboscids are true flies, just as the house fly. They have found a better way of living.

Naturally, to spend the northern summer in Nova Scotia and the southern summer in Chile requires adjustments in a fly's life pattern. One minor adjustment consists of a body pattern that is so flat that the fly can lie closely to a bird's skin and not interfere with its streamlining. It also has adapted to a diet composed of nothing except its host's blood. So it has little to do except to ride around and sip an occasional meal.

The major adjustment the flies (there are several species) have made is in the reproductive process. It may be convenient for a house fly to flit around and lay her eggs on a piece of rotting meat. But this hardly would fit the gypsy life of hippoboscids. The young larvae might have little chance of finding an accommodating bird. So, the hippoboscid has evolved a reproductive pattern most unusual for an insect. In fact, the process is so unusual that the only other fly known to use the pattern is the tsetse fly of Africa.

Instead of laying its eggs upon an animal or plant host, as most insects do, the hippoboscid fly retains the eggs in her body. The eggs hatch within her, go through the larva stage inside the mother, change into cocoons within her, and then are laid, ready to emerge as adults. Although the mechanics vary greatly, the process involves features that would remind one of mammalian reproduction. The result is that young hippoboscid flies are right where they should be, snuggled in the feathers of a flying host.

One might wonder how hippoboscid flies get around to inhabiting the next generation of birds produced by its host. The transfer happens, of course, in the nest. When the bird they are riding dies, hippoboscid flies have a problem. Apparently they recognize it quickly since hippoboscid flies start crawling, or in a few cases flying, from the host as the body cools.

The flies' only stroke of luck occurs when the bird which was their host is eaten by another bird. Sometimes they crawl off the host onto a hawk. But usually things do not work out for them even under those circumstances. As with most parasites, they succeed well only on the species of bird that their parents inhabited.