

want to hike. Regional offices of the Forest Service can provide maps of the National Forests and usually have special maps for National Forest wildernesses.

Write to the State recreation departments. Maybe you will want the Geological Survey's topographic maps, which can give details of the height of the land and steepness of climbs, as well as streams, lakes, and trails. Plot your course.

And now, with pack on back, take with confidence that first step that leads from backyard to backwoods, to the marvelous country that you cannot see from a jeep, a bike, or even a horse. (DOROTHY M. MARTIN)

Comfort Outdoors

YOU CAN DO a great deal to protect yourself when you are outdoors from the attacks of most insects by using safe and inexpensive repellents, which can prevent biting; properly applied insecticides, which can reduce the abundance of insects; and protective clothing, screened tents, and bed nets, which can keep pests and disease carriers away without the use of repellents or insecticidal sprays.

Repellents are effective against mosquitoes, biting flies, gnats, chiggers, ticks, and fleas. They are not effective against yellow jackets, other wasps, and spiders or scorpions.

Insect repellents you can buy contain such active ingredients as deet, dimethyl carbate, dimethyl phthalate, ethyl hexanediol, and Indalone.

Each of these repellents is outstanding against certain kinds of insects but

varies in its effectiveness with different insects and on different persons.

Each brand must specify the ingredients on its label. All are safe to use and may be applied to the outer clothing or to the exposed skin. Any of them may cause some smarting if it is applied to the mucous membranes or to places where the skin is especially tender, such as the eyelids.

All these repellents affect paints, varnishes, and many of the plastics to some degree. Ethyl hexanediol and deet are much less injurious to painted surfaces than the other repellents and usually do little damage to plastics.

Methods of applying repellents differ with the kinds of insects involved.

To ward off mosquitoes and biting flies and gnats, spread the repellent uniformly over the exposed skin and clothing. Treat especially well shoulders and thighs where the clothing is tight.

Shake a few drops from the bottle or spray from the pressurized can into the palms, smear evenly, and then apply with the hand to the skin or clothing. Skin and clothing may be sprayed directly from a pressurized can if you are careful so the repellent will not get into the eyes.

For protection against chiggers, ticks, and fleas, rub or spray the repellent on the socks and other clothing. Apply liberally along all openings of the clothing, such as inside the neckband, the fly and cuffs of trousers, and the tops of socks.

THE NUMBERS of biting, stinging, and other annoying insects can be reduced through the use of insecticides.

Space sprays and aerosols are designed to treat the air to kill flying insects. Aerosols are sold in pushbutton cans. Space sprays require a sprayer that emits fine droplets.

Their small particles are not satisfactory for treating surfaces on which insects crawl. As their effectiveness is fleeting, they do not offer hazards to the user, to other persons, or to wildlife when they are properly used.

Sprayed into the air around a picnic site, in a tent, or other small areas, they will kill flies, mosquitoes, and gnats. They clear the area of flying insects for at least 30 minutes. Control may last much longer if the insects are not actively migrating.

Space sprays usually contain pyrethrins or allethrin and may also contain DDT, methoxychlor, lindane, malathion, or dichlorvos in low concentration. They will be clearly labeled for flying insects, such as flies and mosquitoes. They will not be labeled for control of crawling insects, such as ants and roaches. Only a few seconds of spraying is necessary in a tent or closed automobile or trailer. Follow the instructions on the product label.

When you spray a small place, such as a picnic site or backyard, hold the can upright as close to the ground as possible and walk back and forth upwind of the area to be protected. If you use a hand sprayer, hold it about 3 feet above the ground while you spray. Do not allow the spray to contaminate food, water, and utensils. Do not spray trees, shrubs, and other vegetation from close up; spray burn may result.

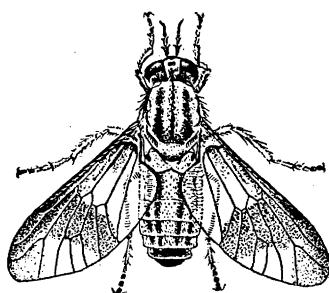
MECHANICAL MEANS of insect control should not be overlooked. For example, windows and doors on tents should be screened. If you sleep outside a tent, use a bed net.

A hat will help prevent the bites of deer flies. Some persons find that a tasseled brim aids in keeping gnats out of the eyes.

In tick country, wear slacks or long trousers and tuck the bottoms of the legs into the tops of boots or socks.

A fly swatter is the most efficient way to kill one or two flies. In an automobile and trailer, a folded map or newspaper makes a good improvised swatter for killing a wasp or yellow jacket.

In tents, floors properly fastened to the sides will keep out scorpions and spiders.



Deer fly.



Mosquito in act of biting.

Small nets should be used to cover food in open dishes.

Always place garbage in the containers provided for the purpose. In wilderness areas where containers are not supplied, bury the garbage at least 2 feet deep or burn it. In a semi-permanent camp, your cleanliness and sanitation are the best means of preventing insect buildups. Body wastes should be buried, if there are no toilets.

MOST KINDS of spiders and most scorpions are not particularly dangerous, although bites and stings may be painful.

A clean campsite is not likely to be infested with black widow spiders. Before pitching your tent, clear the area of dead leaves, twigs, and loose stones—scorpions and spiders may be hiding there.

If you are in scorpion territory, check your shoes in the morning before putting them on; scorpions may be hiding in them. Scorpions and many kinds of spiders are active at night and hide during the day. Their hiding places include fallen leaves, underneath loose bark of logs and trees, under rocks,

between layers of shalelike rocks, and animal burrows. Do not camp nearer than necessary to rockpiles and fallen trees.

Yellow jackets nest in holes in the ground. Various other kinds of wasps nest in trees and bushes, under rock ledges, in hollow trees, and under some open shelter, such as the eaves of a building. Stay away from the nests when you see them.

Sometimes the various wasps visit picnic areas where they feed on watermelon rind, bits of hamburger, and other garbage. If yellow jackets are numerous in a picnic site, it may be almost impossible to eat even a simple meal, as the wasps will even alight on a sandwich on its way to the mouth.

Except in a backyard, little can be done about yellow jackets and other annoying wasps. At home, the nests can be sprayed with insecticide, but in a public park, wilderness area, or other location away from home, the nests quite likely cannot even be found and should not be sprayed by anyone but the park ranger. You may simply have to move to another location where the wasps are less numerous.

Since spilled food and garbage may attract yellow jackets, see that your picnic or camp site is well cleaned up when you leave. For those who are camping, a tent-size mosquito bar or well-screened tent fly will keep these pests at a distance. There are many outdoor recreation areas where wasps are not a problem.

YOU CANNOT, need not, and must not feel that all insects are bad or bothersome.

There are at least 120,000 different kinds of insects in North America north of Mexico, but only a few kinds are inclined or even capable of interfering with your fun.

Many kinds are beneficial. All are worth learning about. Some are even beautiful to look at.

Take along an inexpensive book on insects and read about those you see. Insects are an important part of

Nature. Without them, many plants could not be pollinated and would have no fruit. They have helped make the world around you what it is.

By all means get outdoors and enjoy Nature. You should realize, though, that you may encounter insect problems. Go prepared. Take along some insect repellent and an aerosol bomb. You will expect to wear outdoor clothes. Shorts are cool but let too much skin be exposed to mosquitoes and are no barrier at all to ticks and chiggers. Even one mosquito when you are falling asleep can be annoying. You may find dozens or even hundreds, so take a screened tent if you plan to camp out.

Above all, keep your camp or picnic site clean; properly dispose of garbage and other wastes. You are about to meet Nature, and insects are a part of outdoor living. (JOHN A. FLUNO AND D. E. WEIDHAAS)

You and Wildlife

MOST WILD CREATURES fear man instinctively and avoid him whenever possible. But remember, when you are on vacation in the country or mountains, or woods, that you are invading their home territories, and it is only natural that they resent your intrusion. If they mistake your intentions, they may stand up for their rights, occasionally in aggressive fashion.

To the uninitiated, nothing seems to inspire more dread than the possibility of encountering poisonous reptiles. This deep-seated fear is understandable, but also it may be unreasonably exaggerated.