

# 'Inventors' Could Learn From Insects

By Lydia King Frehse  
Special Writer for The Birmingham Economist

Given another lifetime to live and to learn, insects might well be the choice study of this nature scribe.

One never ceases to marvel not only at their highly socialized and instinctive behavior but also at their unique bodily adaptations to meet every necessity of their daily existence.

Consider the common housefly. This creature has a single pair of wings; the place of a second pair is taken by two thread-like structures with knobbed ends called "halteres." These act like a gyroscope to stabilize the insect's flight. Here the weight vibrates back and forth instead of spinning on a wheel as it does in a toy top. (These halteres are well demonstrated on a magnified model of a fly displayed at the Cranbrook Institute of Science.)

**DRAGON FLY NYMPHS** which live in the water have long been using the idea of jet propulsion, a principle only recently used by man in designing rockets and airplanes.

In the process of breathing, water is drawn into the body through valves at the rear end of the abdomen. As this liquid is expelled over the gills the insect is propelled forward, the rate of release determining its speed.

The "feelers" which you see growing from the heads of most insects serve the same purpose as do our TV antennae; that of picking up messages for their owners. Although the method of their functioning is not completely understood, scientists believe they are vital to the well-being of insects which have poor vision and

which lack a keen sense of smell. The scarab beetle, sacred to the ancient Egyptians, is a species of dung beetle which deposits its eggs in a ball of feces which it molds and rolls over the ground. Later this serves as a well-stocked lair for the newly hatched larva.

The front legs of the beetle bear a marked resemblance to a sculptor's modeling tools and are used in the same way.

**WHO OF US** on some summer's night during his childhood has not been intrigued by the dancing image of fireflies?

Just how this insect (which is another species of beetle and not a fly) turns his light off and on is not known. Located on the underside of the rear end of the abdomen, we do know that he uses it as a flashlight to find his mate in the darkness.

The ichneumon fly carries a long, slender ovipositor protruding from the tip of its abdomen. Delicate as this organ appears to be,

it can penetrate two or three inches of bark and wood to reach the tunnel of certain wood-boring larvae where it deposits an egg.

Upon hatching, the fly larva feeds upon its luckless host and after pupating makes its way through the already bored tunnels of its host to emerge full-grown into the outside world.

**IF YOU EXAMINE** the beak of a female mosquito (the male cannot bite) under a microscope you will see that it is actually a sheath-like case containing two saws, two lancets and two syringes.

When this insect finds a soft spot she aims her beak and the needle-sharp tools pierce the skin. This thrust is followed by one syringe which injects saliva to prevent the blood from coagulating and the second soaks up this same liquid which feeds the mosquito.

**THE HONEY BEE** carries a kit of tools which rival those carried by the Fuller brush man.

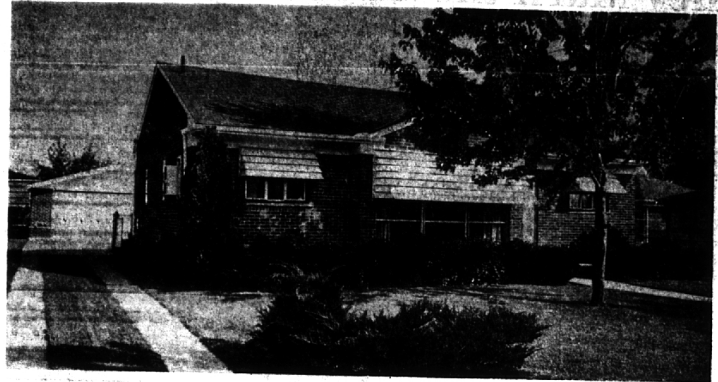
On each hind leg is a pollen basket. Just above this is a device for cutting and molding wax and on the inside of the leg are rows of stiff hairs used as combs. A scraper for cleaning the antennae is located at the joints of each front leg.

Other little hairs and brushes on the legs remove dust from the body while hooks and sticky pads on the feet enable the bee to cling to any surface.

The insect's sharp sting is a drill which acts like a hypodermic needle to inject poison into the victim.

These are only a few of the devices fashioned by nature when she plays the role of the "Great Inventor."

October 31, 1968 THE BIRMINGHAM (MICH.) ECCENTRIC 5-D



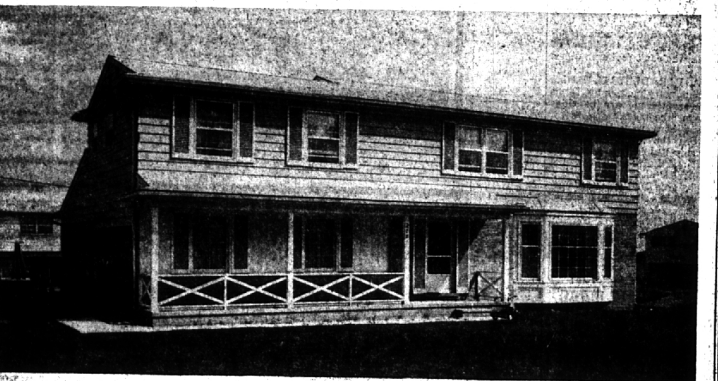
## Ready To Move In — Beverly Hills

Very well-maintained brick ranch in excellent location. 3 bedrooms, 1½ baths, paneled recreation room in full basement. Air Conditioner, 2½ car garage—Carpeting and draperies included. VACANT—\$20,900.



## Wing Lake Privileges — Wooded Setting

Set amid beautiful towering trees, this extremely comfortable 3 bedroom, 2 full bath brick ranch is waiting for you. Gracious living room, large dining area, and cozy fireplace Family Room. Dishwasher in bright kitchen. Screened porch—2½ car finished garage. \$27,900.



## Year Old — 5 Bedrooms — Vacant

Outstanding Bloomfield, 2½ bath home on 120 ft. landscaped site. 21 ft. fireplaced Family Room. Full basement—2½ car attached garage. Very comfortable gas heated home with paved roads, water and sewer. Built for "Family" enjoyment. \$30,950.

# Chamberlain Co. REALTORS

975 S. Hunter Blvd., Birmingham, Mich. MI 6-6000

31500 Northwestern Hwy., Farmington, Mich. MA 6-9100

## SOME PEOPLE . . . . .

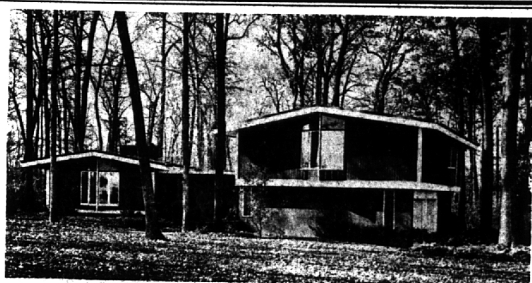
think lots are all alike. NOT SO!

You'll see a difference . . . In *Overbrook*\*

MAX BROOCK INC.

MI 4-6700

\*Paved roads, water, sewer, underground utilities



## MASTERPIECE OF CONTEMPORARY LIVING By TAG KETTLESON

Have you been discouraged in your search for that rare home that offers the combination of casual living in an atmosphere of simple dignity? Here it is on a lovely corner lot with tall trees making a perfect setting for this 3 bedroom, 2½ bath home with large living room, separate dining room, large family room. Exclusive neighborhood of beautiful homes and Bloomfield Hills Schools.

\$42,500.00

CHARLES J.

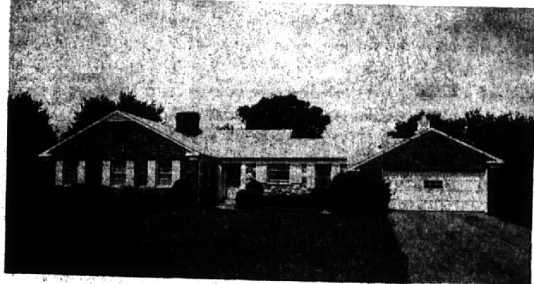
## VAN HORN INC.

From Birmingham MI 6-2400  
576 N. Woodward Ave.

From Detroit JO 4-5644  
Birmingham, Michigan

## OUTDOOR LIVING ROOM

Large Scenic Lot



- Valley Woods School
- 3 bedrooms
- 2½ baths
- Library
- Family Room
- Large Living Room
- Carpeting, Draperies



## FRED PIERCE INC.

460 NORTH WOODWARD, BIRMINGHAM, MICH.  
Midwest 7-1414