

Grad student eats what bugs him

By Tim Foarde
Battalion Staff

Turkish women in the Middle Ages ate them to acquire that "plump" belly the male Turks found sexy.

People in China, South America, Africa, and some Polynesian islands still consider them delicacies.

Pound for pound they pack more protein and carbohydrates than any conventional meat source and represent a plentiful food source for a hungry world.

If you cheated and peeked at the pictures on this page, then you already know what this wonderful food source is. You guessed it: bugs.

Wayne Moore, an entomology graduate student at Texas A&M, first adventured into entomophagy (insect-eating) on an outing in the Sierra Nevada mountains. Since that first experience, he has learned catching, cooking and eating insects can be tasty and fun.

Dietary prejudice:

Because other food sources are available, Moore said, people will not make the effort to overcome their negative attitude towards insect-eating. He said there is no health reason why people shouldn't eat insects.

"The only thing preventing us from utilizing insects as a more important food source is our own dietary prejudices," Moore said. "Otherwise insects would be harvested. It could be a very profitable business for someone."

People nowadays eat insects as a delicacy because of the novelty and "fun," Moore said. But if world hunger worsens or if individuals are threatened with starvation, insects as a food source could make the difference between surviving or starving.

"Many societies think of them as gourmet treats, comparable to crab, shrimp and lobster, which are closely related to insects (they're all arthropods) and are similar in taste," he said.

The fact is, Moore said, all of

us unwittingly eat insects everyday.

The Food and Drug Administration has even set allowances for maximum levels of insects or insect parts in commercially sold foods. Companies usually set more stringent standards for themselves, but here's a sample of the FDA's legal limits:

Canned tomatoes: 10 fruit fly eggs or 2 moth larvae per 100 grams.

Peanut butter: 50 insect fragments per 100 grams.

Raisins: 10 or more insects or equivalent and 35 or more fly eggs per 8 ounces.

Wheat: 1 percent by weight of insect-damaged kernels.

In the beginning...

Gracing the table with insect delights may be unusual but it certainly isn't a new idea.

Cave drawings and human coprolites (petrified feces) tell us our ancestors ate insects in large quantities, Moore said.

Many North American Indian tribes were entomophages. Aztecs from ancient Mexico preferred corn ears that contained worms over those that were pest-free.

And it wasn't just the "savage" who made a meal of insects; the pioneer farmers (the ones who conquered this land and made hotdogs, apple pie and McDonalds possible) probably also ate bugs, Moore said.

"When hordes of grasshoppers cleaned out prairie croplands, farmers had the option of eating the raiders themselves," he said.

Good and good for you ...

Not only is the adventure and novelty of bug-munching sure to be a hit at your next dinner party, the little varmints are good for you.

Moore said conventional meats are often protein-deficient when compared to insects. Chicken has a protein content of just over 20 percent, more than beef, pork, lamb, or fish. Yet some insects contain up to three times that percentage.

"If you were to stuff your

mouth once with waterbugs or spiders, you'd have to fill it three times with chicken to get the same food value," Moore said.

A conservative estimate of protein content for some species:

Termites 20—45%
Grasshoppers..... 15—60%
Beetles (larvae and adults)

11—30%

Butterflies and moths

8—38%

Bees and ants 7—25%

Insects also supply carbohydrates, fats, minerals, salts, and vitamins A, B2, D and niacin.

Although vitamin content in most insects is not enormous, Moore said, immature honeybees are an exception. Uncooked, 100 grams of honeybee supply twice the U.S. recommended daily allowance for vitamin A, and 1,500 times the RDA for vitamin D.

To avoid vitamin D deficiencies linked with fatigue, arthritis, and poor bone and tooth growth, perhaps a "one-a-day" honeybee may be in order.

To eat or not to eat...

Although many insects are edible, there are a few simple do's and don'ts in choosing your prey.

Grasshoppers, butterflies, honeybees, waterbugs, crickets, mealworms and many other common insects make great foodstuff. There are, however, a few rules to keep in mind while exploring the exciting world of entomophagy:

- 1) Insects spoil fairly quickly after they die, so eat them within several hours of the kill, Moore suggests. They can be kept fresh in the refrigerator for several days. Never eat any insects found dead.
- 2) Don't eat any caterpillars with "fuzzy" bodies. Stick to relatively hairless species that are not feeding on poisonous plants.
- 3) Because bugs may carry pesticide residues, don't collect them near crops that are heavily sprayed.
- 4) To test an unfamiliar insect for consumption safety, Moore gives a simple procedure for trying out an insect:

"First, be sure the insect is free of any objectionable odors and doesn't produce skin irritation when handled. Next, place a small portion of the bug inside your lower lip for a couple of minutes. It shouldn't taste acid, bitter, or soapy and shouldn't burn the tender skin there.

"Spit the sample out if it is objectionable in any way. Finally, if the results of the first two tests are acceptable, eat only a small portion. If there are no ill effects within a day or more, you can go on to try progressively larger quantities."

Preparing the catch...

Catching the bugs can be as much fun as eating them, Moore said.

Look for insects under rocks, in rotten tree logs, streams,



Wayne Moore sits down to a meal featuring various dishes containing insects. Most people wouldn't even consider eating insects, but Moore says they are high in protein.

under streetlights or in your own backyard.

Use a butterfly net for butterflies, grasshoppers and other flying insects. Don't forget containers — plastic bags, coffee cans, glass jars, etc. — to put the bugs in.

After making the catch, put your insects in the refrigerator for about 30 minutes to slow them down. Then take them out, pull off any wings and the legs if they are particularly big. Antennae and heads are optional. Wash the bugs in a collander, pat them dry and place them on a paper towel. Now you're ready to get cooking.

Cook them critters!

Insect eating can be approached by two methods: the direct and adventurous recipe or the indirect disguise-the-insect recipe. For the rustic, brave soul who wants to experience the flavor and crunch of his bugs, this basic bug-fry method is suggested:

Garlic Butter Fried Insects

- 1/4 cup butter
- 6 cloves garlic, crushed
- 1 cup cleaned insects

Melt butter in fry pan. Reduce heat. Saute garlic in butter for 5 minutes. Add insects. Continue sauteeing for 10-15 minutes, stirring occasionally, till crisp.

Some may prefer a recipe

which hides the main ingredient. This is not to advocate "tricking" your guests, but rather to emphasize that objections to eating insects have little or nothing to do with their taste or food value. Try this recipe at your next get-together:

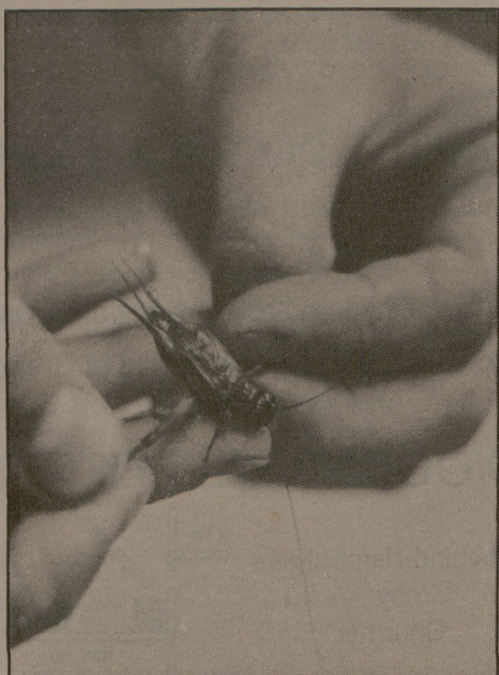
Chirping Stuffed Avocados

- 4 ripened avocados
- 1 cup cooked crickets
- 3/4 cup ketchup
- 1/4 cup prepared horseradish
- Juice of 1 lemon
- Dash of pepper sauce
- Head of lettuce

Bring crickets to boil in 2 cups of water with salt, pepper, sage, and chopped onion to taste in a medium-sized saucepan. Allow to simmer 30 minutes until tender and drain.

Cut avocados in half; remove pit. Combine crickets, horseradish, ketchup, lemon juice and pepper sauce. Chill. Spoon into avocados and serve on a bed of lettuce.

More ideas and delicious recipes (such as "Applesauce Surprise Cake" made with chopped earthworms!) can be found in *Entertaining with Insects* by Ronald Taylor and Barbara Carter (\$3.95, 1977, Woodbridge Press) and *Butterflies in My Stomach* by Ronald Taylor (\$8.95, 1975, Woodbridge Press).



Moore handles what will be part of his dinner.