

Kid's KOrner

Those Intriguing Spiders

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National Geographic News
Service

Most spiders are downright ornery.

Nearly all of these solitary creatures end up fighting or cannibalizing each other when they get together.

Among the 34,000 spider species, only about 18 cooperate in a big way, almost no invertebrates except social spider and ants do this to such a degree, says Leticia Aviles, an evolutionary biologist at the University of Arizona.

"These very social spiders nest and stay together all their lives," she says. "They share food and cooperate in prey capture, web-building and maintaining the nest. In some cases they even take care of each others' broods."

As befits their laid-back lifestyle, all of these eight-legged groupies live in tropical and subtropical regions.

Aviles discovered three species of social spiders in the rain forests of her native Ecuador. So far, none has been officially verified in the United States, although researchers from the University of Tennessee think they have located a colony along the Clinch River in the eastern

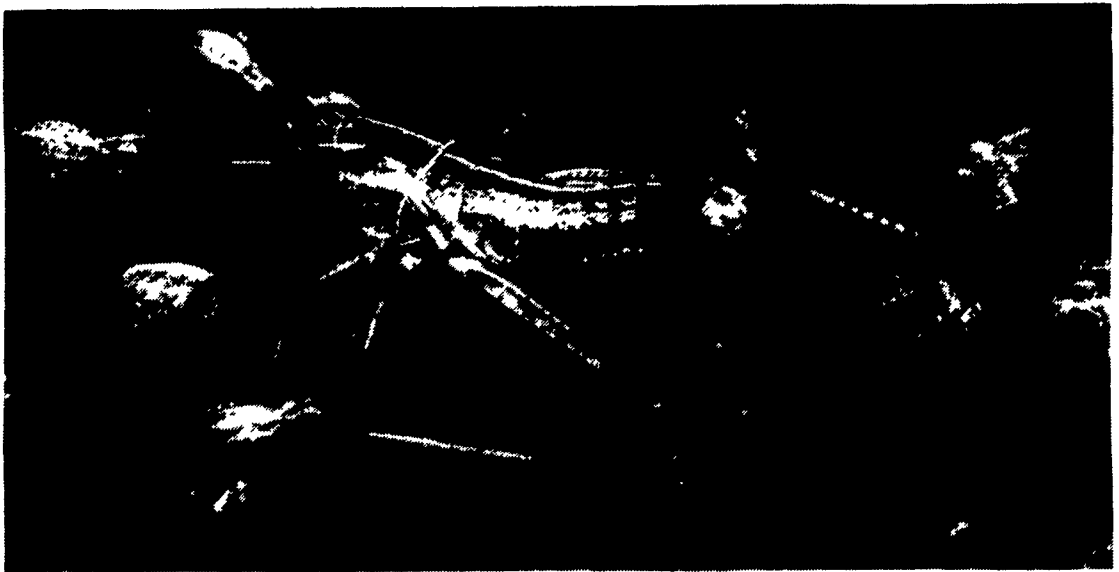
part of the state.

Susan E. Riechert, a zoologist at the Tennessee University, theorizes that social spiders prefer warmer climates because they don't hibernate for long periods like their cousins in cooler places. "They can just continue to keep going and producing individuals, so you have some continuity of overlapping generations," she says.

They do a lot of producing, because most nests average 10 females to one male. Unless disrupted by outside conditions such as severe storms or large animals that destroy their homes, the spiders stay together indefinitely and usually don't mingle, even with spiders of the same species in other colonies.

When calamity strikes, the animals migrate as a group to a new location. Aviles watched 45 nestmates in Ecuador follow each other single file through thick undergrowth for two days. "Only one spider out of the group got lost," says Aviles, whose research has been supported by the National Geographic Society. "The rest remained together."

Despite inbreeding, the social spiders persist, perhaps because they've been doing it for millions of years.



Australian social spiders prepare to make a meal of a grasshopper tangled in their web.

Inbreeding probably accounts for the predominance of females. "It would be silly to produce more males, because they'd be competing with each other and they're genetically identical," says Riechert. "Besides, females are the workers of the colony. It's really the females that are sort of carrying the males along."

So when dinner's served, it's usually compliments of the females, who closely coordinate their hunting activities.

In Ecuador, Aviles observed females, positioned along the edge of a nest closest to a struggling insect, launch a joint

assault. They then hauled the hapless victim away to share with nest mates. "Most social species just drag home their prey, and it's not very organized," says Avile.

Not so with a small, yellow Ecuadorian spider that captures unwary victims in a sticky web that coats both sides of leaves.

Aviles watched three females join forces to carry a large ant from the upper to the lower surface of the nest. After pieces of the web were snipped to free the catch, one ant pushed, another pulled and the third lifted the prey to keep it away from the sticky surface.

"Once at the edge," Aviles observed, "the ant was successfully moved to the other side by having one spider hold it from above as it from above as it walked toward the edge while the other two supported the item and pulled it from below. It infers some kind of communication."

By coordinating their web-building talents, social spiders can build large structures to snare oversize prey suitable for a communal banquet. The menu might include large katydids, beetles and moths.

Kid-Friendly Microwave For After School Hunger Pangs

Today's on-their-own children are learning cooking independence first-hand by mastering the microwave, whose speed, simplicity and relative safety are attractive to junior chefs. In less time than it takes to turn on the television, a tasty and often creative snack debuts.

Adults, too, appreciate the safety of a microwave oven. The microwave oven turns itself off automatically, so less supervision is needed. The problem of scorching, resulting in messy pots and pans, is eliminated, so the dreaded task of clean-up is minimized.

The following American Dairy Association recipes are simple enough to encourage the most reluctant of youngsters because they use products kids generally like and most families keep on hand.

Before your child assumes the helm, here are a few tips to make microwave cooking safe and easy. We recommend reviewing them with junior chefs to ensure successful results.

- Read each recipe carefully.
- Gather all ingredients before you begin.
- The microwave oven cooks food fast so be sure to set the timer for the shortest amount of time and add extra seconds as needed.
- Never operate the oven when it is empty.
- Use glass or plastic dishes, not metal or foil.
- Keep hot pads nearby to use when removing a dish from the microwave oven. The heat of the food may make the dish hot.
- Ask Mom or an older brother or sister to help you with things you haven't done before like chopping and measuring.

MEXI OR ITALIANO POTATO 1 serving

- 1 medium-sized Idaho potato, scrubbed
- 1 tablespoon butter
- 3 tablespoons mild salsa*
- 1/4 cup (1 ounce) shredded Cheddar cheese
- Sliced pitted ripe olives
- Tortilla chips, if desired

Pierce potato all over with tines of a fork. Place potato on paper towel in microwave. Microwave on High (100%) for 2 minutes. Turn potato over. Microwave for 2 to 3 minutes more, or until potato is tender when pierced with a fork. Carefully remove from microwave. Place on plate. Slit top of potato. Top potato with butter, salsa and cheese. Microwave on High (100%) 20 seconds, or until cheese is melted.

GOOEY CEREAL CRUNCH BALLS Yield: 36

- 1 package (8 ounces) cream cheese
- 2 tablespoons butter
- 1/4 cup honey
- 1/2 teaspoon cinnamon
- 4 cups toasted rice cereal
- 1 cup miniature marshmallows
- 2/3 cup EACH: raisins, mini semi-sweet chocolate pieces

Place unwrapped cream cheese and butter in 4-quart microwavable mixing bowl. Microwave on High (100%), uncovered, 2 to 2 1/2 minutes, or until butter is melted and cream cheese is soft. Stir with a whisk until well combined. Whisk in honey and cinnamon. Stir in cereal, marshmallows, raisins and chocolate pieces. Form mixture into 1 1/2-inch balls.



Mexi Potato — hearty, quick and easily prepared by the resident junior chef. Goopy Cereal Crunch Balls are great with a glass of milk for dessert.