



Boxed object, 1993 RO, is a newly identified member of the outer solar system.

Jewitt, Luu

may ultimately feed down [to the inner planets] over the next billion years.”

Alternatively, notes Jewitt, the four bodies may rank as the first Trojan asteroids found near Neptune. Defined as asteroids that lead or trail a planet by about 60°, Trojans are known to exist only near Jupiter.

Based on an analysis of the past 20 million years of solar system dynamics, Matthew J. Holman and Jack Wisdom of the Massachusetts Institute of Technology reported in the May *ASTRONOMICAL JOURNAL* that Saturn, Uranus, and Neptune could each have a stable family of Trojans. A more extensive analysis by the researchers also indicates that Kuiper belt residents could “leak” more easily into the inner solar system than previously thought.

— R. Cowen

Kids cite value of abuse-avoidance classes

Elementary and secondary school students reap real-world benefits from instruction aimed at helping them to avoid and to report physical and sexual abuse, according to a study presented at a national symposium on child abuse prevention in Dallas last week.

“This is the first study to suggest that, when children with abuse-prevention training actually get victimized or threatened, they behave in ways envisioned by prevention educators,” says David Finkelhor, a psychologist at the University of New Hampshire in Durham who directed the survey.

In the past decade, reports of sexual abuse have increased greatly, as has scientific debate about the psychological aftereffects of such abuse (*SN*: 9/25/93, p.202).

Many elementary and secondary schools in the United States offer abuse-prevention instruction in a variety of formats. Most stress the frequency and nature of physical and sexual abuse, teach children to reject or escape from unwanted overtures and threats, encourage youngsters to tell an adult about such incidents, and assure students that they are not to blame for abusive encounters.

Finkelhor and his co-workers conducted telephone interviews with a nationally representative sample of 2,000 youngsters age 10 to 16, as well as their

parents or caretakers.

Two-thirds of these children reported attending a school program that focused on abuse or victimization prevention. One in three students received “comprehensive” instruction, which included information about sexual abuse within the family, discussion of differences between “good” and “bad” touching, and sessions that occurred on more than one occasion.

A total of 837 youngsters experienced an attempted or completed physical assault; of that number, 115 cited cases of attempted or completed sexual abuse.

Several encouraging findings emerged from the interviews, Finkelhor contends. Children who received comprehensive instruction:

- displayed markedly more knowledge about sexual and physical abuse than other children;
- often used self-protection strategies recommended by instructors when victimized or threatened;
- felt better about how they handled instances of attempted or completed abuse; and
- showed much greater willingness to disclose such episodes to someone else.

Children who received instruction from their parents on how to avoid sexual abuse in addition to comprehensive abuse-prevention training at school were even more likely to benefit, Finkelhor asserts.

“Parental instruction has a heightened urgency to children, gets repeated over time, and is seen as more credible than school programs,” he says.

On a less encouraging note, children who attended comprehensive school programs reported no greater ability to prevent physical or sexual abuse from being completed. In fact, particularly between the ages of 13 and 16, they suffered more physical injury during sexual abuse than other children.

This finding may reflect a greater tendency among older children to fight back during episodes of sexual abuse that approximate adult rape, Finkelhor says. Abuse-prevention programs may need to address more thoroughly the issue of how to avoid physical injury during a sexual assault, he argues.

The survey lacks independent confirmation of the children’s abuse reports and probably underestimates the incidence of incest in the sample, the New Hampshire psychologist notes. In addition, the findings do not apply to abuse-prevention programs aimed at children in preschool and early elementary grades.

“We can’t develop policies for abuse-prevention programs based on this one study,” Finkelhor says. “Other researchers need to conduct similar surveys.”

— B. Bower

Lizards flash colors people can't see

People flirt with smiles and warn off rivals with sneers. Likewise, lizards such as this *Anolis cristatellus* (bottom, right) gesture, unfolding a throat fan — called a dewlap — to communicate.



But dewlaps can send signals that humans cannot see, says Leo J. Fleishman, a physiologist at Union College in Schenectady, N.Y. Images from an ultraviolet video camera (top, right) reveal a brilliant dewlap in *Anolis pulchellus* that contrasts sharply with the surrounding vegetation, which tends to absorb light at those wavelengths, Fleishman and his colleagues report in the Sept. 30 *NATURE*. In normal light, the dewlap is less flashy (top, left).



Fleishman/NATURE

Fleishman and Ellis R. Loew of Cornell University in Ithaca, N.Y., stumbled onto special photoreceptors tuned to UV wavelengths while studying the eyes of these lizards for other reasons. They now know that many other lizards and a few snakes also possess these photoreceptors, says Loew.

Among the five anole lizards they investigated, the three that live in open, sunny areas had dewlaps that reflected UV light. The dewlaps of the other two, which live near the shaded forest floor, did not, says Fleishman.