

Behavior

Bruce Bower reports from Philadelphia at the annual meeting of the American Psychiatric Association

Child sexual abuse: Sensory recall . . .

Impassioned debate currently surrounds claims by adults who describe memories of childhood sexual abuse that emerge years or decades after the fact. Much research indicates that conscious recall of most experiences gets distorted over time by a variety of influences, leading to skepticism about the accuracy of recovered sexual abuse memories (SN: 9/18/93, p.184).

However, the terror that accompanies actual instances of such trauma may interfere with the brain's conscious recall system while leaving intact conditioned fear responses stored as visual images or physical sensations in other brain regions, asserts Bessel A. van der Kolk of Massachusetts General Hospital in Boston. He and his coworkers find that adult memories of confirmed childhood sexual abuse invariably appear first in perceptual fragments that get woven into a coherent story over weeks, months, or even years.

Early, prolonged sexual abuse produces the most fragmented perceptual memories of trauma, a process facilitated by a stress-induced disruption of consciousness known as dissociation, van der Kolk contends.

His group has conducted intensive interviews with 43 adults — mostly women — who responded to a newspaper ad seeking survivors of severe trauma in childhood or later. Of that number, 29 cited periods of extensive or moderate amnesia for their traumatic experiences. A total of 37 individuals obtained evidence supporting their memories, such as a sibling's confirmation that childhood sexual abuse had occurred or police and medical records of a devastating car accident.

All participants reported remembering traumatic incidents in perceptual ways first and developing verbal accounts as time passed, van der Kolk argues. For instance, one woman had panic attacks, feelings of being smothered, and sensations of genital rubbing prior to remembering her sexual molestation by her mother and uncle.

Amnesia usually lifted in response to a changed relationship with the perpetrator (or that person's death), involvement in romantic relationships, or exposure to trauma-related sights or sensations. About one-quarter of the volunteers initially regained traumatic memories during psychotherapy.

Post-traumatic stress disorder, a cluster of debilitating symptoms, occurred only in the six persons who could not make a coherent story out of perceptual elements. "Unfortunately, people seem to need to remember the details of their trauma to deal with it effectively," van der Kolk holds.

. . . and treating survivors

Many clinicians assume that psychotherapy can best serve victims of childhood sexual abuse by directly addressing their traumatic memories and associated feelings of powerlessness and confusion. However, a pilot prospective study finds that "trauma-focused" and "present-focused" group therapy work about equally well for incest victims, reports David Spiegel of Stanford University.

Spiegel and his coworkers randomly assigned 18 women who had experienced incest as children to one of the two therapies. The trauma-focused group employed self-hypnosis and group discussion to elicit traumatic memories and explore feelings and behaviors spurred by abuse. Members of the present-focused group looked primarily at their current problems in dealing with others and discussed how to improve relationships.

After 6 months of weekly therapy sessions, depression decreased equally in the two groups. Dissociation symptoms fell more sharply in trauma-focused therapy, while anxiety showed a greater decline in present-focused treatment.

"Both these groups helped incest victims, although there was no clear therapeutic difference between them," Spiegel says. "We'll need a larger sample to make definitive conclusions."

Biology



Denizens of the deep

Norwegians called them mermen. Jules Verne described them in *Twenty Thousand Leagues Under the Sea*. Better known from fiction than real life, giant squid make "live" appearances rarely, usually as bits and pieces in fishing nets or in the stomachs of beached whales.

Then 3 years ago, Maine fishermen captured a 7-foot, 135-pound *Taningia danae* 100 miles east of Cape Cod, a first in the western Atlantic. Unlike the 9-foot 440-pound giant squid *Architeuthis dux* that washed onto a Massachusetts beach years earlier, this new squid has hooks instead of cuplike suckers on its arms, says Clyde Roper, a zoologist with the Smithsonian Institution's National Museum of Natural History in Washington, D.C. Those hooks help the squid grab prey.

It also bears an unusual, 3-inch-long light organ at the tips of two arms. Like an eyelid, a membrane slit down the middle covers the light organ. Almost 20 years ago, while cruising off Hawaii, Roper saw these organs in action when the boat's nets captured a 6-inch *T. danae* alive. When he reached into the squid's tank, it flashed blue-green light and then attacked. "No one had ever seen them light up before," he says. The squid flashes to scare off potential predators.

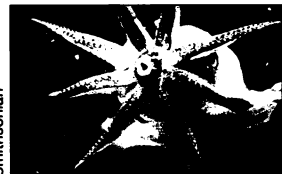
Now the *T. danae* and the *A. dux* are on display at the natural history museum. With a video of a squid moving at 45 miles an hour and a demonstration of the light organ's effectiveness, the exhibit should take these largest of invertebrates out of the realm of fiction for visitors, Roper says.

Other cryptic creatures

As rare as glimpses of giant squid may be, other creatures show themselves so infrequently that many scientists question their existence. Those mysterious animals are the lifeblood of the International Society of Cryptozoology, based in Tucson.

Consider the burrowing Vietnamese sharp-nosed snake, collected by U.S. naval officers in 1968 during the Vietnam war. The specimen was lost before it made it to a museum and is known only from a few photographs, says mammalogist Gwilym S. Jones of Northeastern University in Boston. He and Northeastern herpetologist Van Wallach have named this reptile *Cryptophidion annamense*. It comes from the same highland region of Vietnam as the newly discovered Du Quang ox and giant muntjac deer (SN: 6/19/93, p.397), they report in the current CRYPTOZOOLOGY.

In that same annual journal, two other researchers describe hairs supposedly from a giant hairy primate called the Yeren, or Chinese wildman. Using the sensitive analytical technique known as particle-induced X-ray emission, the scientists first found three hairs with much higher iron-to-zinc ratios than hairs from humans, other primates in China, or bears, says Frank E. Poirier, a physical anthropologist at Ohio State University in Columbus. Brown and red hairs collected in two other Chinese provinces were similar, a result later confirmed by a second analysis performed in England, Poirier and J. Richard Greenwell of the cryptozoology society report. Electron micrographs revealed that these Yeren hairs also exhibit an unusual structure and pigmentation. Some scientists suggest the Yeren is a giant ape, previously thought to be extinct, or perhaps a modern descendant of that primate.



Squid attack: Imagine this flashing blue-green.



Have you seen this snake?