

Say Goodbye to Whales

When a beluga whale dies on the St. Lawrence River, Dr. Pierre Beland, a French Canadian scientist, transports it to his laboratory where he does an autopsy.

His findings are not good. "I believe they are doomed," he said in an interview.

The health of the whales is being impacted by the 40,000 contaminants in use by Canadian industry. Some of the most polluting industries include petrochemical companies, ore processing plants, pulp and paper mills, agribusinesses and others.



Beland's tests reveal that beluga blubber has hundreds of chemicals in it. "Every chemical we have tested for we have found," he said. "We have analyzed for more than 20 pesticides and found each one."

They find heavy metals, such as lead and mercury, which can cause psychological stress; the insecticide mirex, which he says they get from eating "mirex-contaminated eels" and the insecticides DDT and dieldrin. They find

benzo-a-pyrene, which Beland says comes largely from an aluminum smelting plant, and "may be the source of tumors." They find industrial chemicals, such as polychlorinated biphenyls and much much more.

The accumulation of chemicals by a female beluga is less than half that of a male, since many of the contaminants in a mother whale's tissues are unloaded to her calf as it nurses her fat-rich milk, according to Beland, who heads the St. Lawrence National Institute of Ecotoxicology in Montreal, Quebec.

The chemicals are weakening their immune systems so much that they are like aids patients, vulnerable to diseases or conditions that "normally would not affect whales," he said. More than half of the female belugas he has examined have had ailments of the mammary glands such as "bacterial infections, cysts and tumors," he says, adding, "Some of these were lactating, but none would have been able to properly feed their young or it would have been excruciatingly painful."

He has found mother whales that died in childbirth; tumors of the ovaries; atrophied mammary glands; a hermaphrodite that had a normal testicle and penis, as well as a uterus and ovaries; perforated stomach ulcers that released acidic digestive fluid into the abdominal cavity; an emaciated whale with mouth ulcers; bacterial and viral infections; severe inflammation of the gums; necrosis of the testicles, where the testicle tissue had died; ulcers of the esophagus; cancerous

masses that had spread in all directions; nodules, abscesses, cysts and goiters of the thyroid gland; lesions consistent with the impairment of the immune system; lesions of the endocrine glands; cysts and tumors of the adrenal glands; aneurysms; worms in the lungs; twisted spines; spleens blown up like small footballs and rotten teeth.

The population of St. Lawrence belugas has dwindled from thousands a few hundred years ago to 500 today. "If nothing changes, many species will disappear," said Beland.