Animal Welfare Information Center Newsletter

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Legislation Update

- **H.J. Res. 272 To proclaim March 20, 1992, as "National Agriculture Day."**

Introduced March 12, 1992, by Kika de la Garza (D-TX) and referred to the Committee on the Judiciary. Made Public Law 102-267 on April 2, 1992. Agriculture is the Nation's largest and most basic industry and provides more jobs than any other single industry. The United States agricultural sector serves all Americans by providing food, fiber, and other basic necessities of life.

- **S. 2296 To amend the Packers and Stockyards Act of 1921 to make it unlawful for any stockyard owner, market agency, or**

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ALSO IN THIS ISSUE...

APHIS Policy and Marine Mammals

An Interview with Jody Garbe, D.V.M.

Dr. Jody Garbe (JG) is the staff veterinarian for exhibit animals with the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Regulatory Enforcement and Animal Care (REAC). In the following discussion, Dr. Garbe provides an APHIS perspective on legislation and policy regarding marine mammals. Dr. Garbe was interviewed by AWIC staff member Michael Kreger (MK).

MK: What legislation applies to keeping marine mammals in captivity and which agency administers it?

JG: That depends on what species are involved. All marine mammals are covered under the Marine Mammals Protection Act (MMPA); however, the National Marine Fisheries Service (NMFS), which is part of the U.S. Department of Commerce, administers the MMPA regarding cetaceans and pinnipeds. The U.S. Fish and Wildlife Service (FWS) of the U.S. Department of the Interior administers that part of the act which deals with polar bears, sea otters, walruses, and serenians (manatee and dugong). Another law that affects the keeping of these animals is the Animal Welfare Act which is administered by APHIS. In 1979, APHIS published regulations which were formulated by a panel of experts, including those from the display community. These regulations provide standards for maintenance and transportation of all marine mammals in captivity (See 9 CFR, Part 3, Subpart E, sections 3.100 to 3.118 of the Animal Welfare Act).

Facilities must also comply with CITES (Convention on the International Trade

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Observations From The Field: A Marine Mammal Inspector's View

by
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The APHIS inspector is not an expert in marine mammal husbandry or medicine. Out of practicality, he or she is an "informed generalist" who is able to competently evaluate the care of a wide variety of regulated species.

The inspector has been trained in the inspection process and has various levels of guidance and references available. He or she is informed of other regulations that affect the facility and considers specific conditions at each facility such as species, climate, and enclosure design.

While the inspector may use his or her judgment, specific standards exist for marine mammal facilities, health, husbandry, and transportation. Water volume and surface area, frequency and type of water testing, and feeding procedures are specified. General regulations on veterinary care, handling, and licensing, which pertain to all species, also apply.

In addition to recognizing existing problems, the inspector has to think in terms of prevention and must consider facility design, visitor psychology, species behavior, and individual animal idiosyncracies. Training courses, reference materials, and experience gained by visiting other facilities also aid the inspector's evaluation.

Areas of concern encountered during marine mammal exhibit inspections include:

1. water quality
2. shelter/shade
3. feeding
4. handling/protection from the public
5. transportation/acclimation

Water Quality

Water is the life support system for marine mammals. The APHIS inspector initially considers the "big picture" – gross observations of animals and water. He or she must understand the water maintenance and testing systems used by the facility. Records are examined to determine compliance with the standards for bacteria, salinity, filtration, and waterflow. Water maintenance equipment must be well cared for and up to date. Personnel should be trained to demonstrate equipment function and calibration and should confidently discuss water-quality control measures.

Shelter and Shade

Shelter from weather and direct sunlight is required for marine mammals. This can be natural or artificial but must be appropriate for the species and climate. Even cetaceans (i.e., whales and dolphins) may require shade, depending on pool design, local climate, and health status. Providing options for the animals is important since captive environments restrict adaptive strategies. The inspector considers these issues:

- Is there sufficient shade for all animals?
- Do subordinate animals have access to shade?
- How does the amount of shade change during the day?
- Does the temperature of the water affect the need for shade?
- If the animals don't use the shelter, is there a possible design flaw?

Feeding

APHIS standards require that fish used as marine mammal food be wholesome, palatable, and sufficient in quality and nutrition to main-

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tain good health. Food preparation and handling procedures must minimize bacterial and chemical contamination. While evaluating the storage and thawing process, the inspector will examine representative fish in detail. Bucketing and holding of feed, as well as pool-side handling, are also inspected. Questions that may be asked include:

- How is the frozen fish stored and rotated?
- What quantity and types of fish (fatty vs. lean) are fed?
- How is the quality of fish evaluated?
- What are the procedures and timeframes from freezer to marine mammal?
- What are the sanitation and clean-up procedures?

Handling and Protection From the Public

During public display, marine mammals must be handled so that there is minimal risk of harm both to them and to the public. An attendant must be present during periods of public contact, and there must be sufficient distance or a barrier between the public and the animals. The facility must balance this requirement with the public's ability to view and interact with the animals.

Many facilities are designed so that spectators are on a vertical plane above the animal (stadium seating). This design allows unauthorized feeding and accidental dropping of foreign objects (sunglasses or cigarettes), and may prompt visitors to lean over the pool. However, a more horizontal design can also pose problems as it encourages people to toss things to the animals. These problems may come to light by inspecting the facility for the placement of railings and (foreign object) catch barriers and by examining medical records or necropsy reports for problems associated with ingestion of foreign objects. The inspector will also inquire about methods used for employee training and subsequent placement during exhibit hours. If visitors are allowed direct contact with the animals, the facility will need to disclose how the activity is supervised.

Transportation and Acclimation

Being transported and a change of environment can be stressful for any animal, but marine mammals are especially susceptible to adverse effects of such stress. Specific standards regulate transport, and all marine mammals (except the polar bear) must be accompanied by a knowledgeable attendant during transit.

The licensee must assure the health of the animal prior to transport and that the receiving facility has been properly prepared for the arrival. Gradual acclimation to changes in air or water temperature should be well planned and monitored.

Inspection for a planned transport might include these questions:

- What is the age, history, and health status of the animal?
- How will it be introduced to other animals and can any compatibility problems be expected?
- What are the details of the transport and who assumes responsibility for compliance during the trip?
- Have all necessary Federal, State, and local permits been obtained?
- What will the changes in environment include, and how has the animal been acclimated?

Facility staff must be aware that the standards were developed in consultation with experts in marine mammal husbandry and care.

The desired results of the inspection process are an understanding of and compliance with the regulations and standards and the assurance of humane care and use of marine mammals.

For more information on the inspection process or APHIS policy, you may contact: U.S. Department of Agriculture, APHIS-REAC, 6505 Belcrest Rd., Federal Bldg., Rm. 567, Hyattsville, MD 20782 or call at (301) 436-7833. ■

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of Endangered Species) and the Endangered Species Act which are species-specific and are administered by the Fish and Wildlife Service. Applicants must also comply with their State restrictions which are generally more stringent than the Federal regulations.

MK: What is the role of APHIS in the permit process?

JG: We work cooperatively with the FWS and the NMFS. Neither of them has inspection capacity so we do all the inspection work. There is usually a provision within the permit that says the facility will be in compliance with the Animal Welfare Act. Either of the agencies contacts us and we make a recommendation as to whether or not the facility is adequate for the species. Depending on our recommendation, the permit will be issued or not issued. It's an integral rather than a sequential process. That's for bringing in animals (to licensed facilities).

APHIS also licenses facilities for public display under our own jurisdiction. To apply for a permit from NMFS, for example, the facility must be licensed. The unlicensed facility contacts APHIS directly and arranges for a prelicensing inspection. The inspection can be scheduled. We will do the prelicensing inspection and, if they are in compliance at that time, issue a license. The information is forwarded to NMFS or FWS who then decides if a permit is to be issued. If a facility is already licensed and has applied for a permit, NMFS will contact us and we will report the results of a recent inspection and if it is in compliance. If there has not been a recent inspection, APHIS will perform an unscheduled inspection. If there is trouble with the facility or existing problems, we will relay that information back to NMFS. This process occurs both in a prelicensing situation and in a situation where the facility is adding to an established population of resident animals. I might add that we also do unscheduled intermittent and annual facility inspections.

MK: Who is the regulated community with regard to marine mammals?

JG: Aquariums, zoos, traveling acts, contract acts, and hotels. APHIS also does courtesy inspections of Federal installations. NMFS has put a hold on any new swim-with-the-dolphins programs until research can be done on the effects of existing programs on the animals. We do have regulations, however, on what facilities must do when the public comes in contact with the animals, but we defer to NMFS on evaluation of those programs.

MK: Is there frequent communication among the regulating agencies?

JG: I think we're seeing this more and more. Everyone has such limited resources that we want to assist one another and make sure everybody's on the same wavelength. I've been very impressed with the cooperative relationship. I think FWS and NMFS are as committed as we are in the implementation of the Animal Welfare Act and the respective statutes.

MK: What action is taken if an inspector finds a facility with resident animals does not comply with the Animal Welfare Act?

JG: Our approach is to assist facilities with coming into compliance. We document the item that does not comply, suggest ways to remedy the situation, and give them a timeframe to meet guidelines. The maximum amount of time an inspector can provide the facility is 30 days. If the problem requires more time, such as a major structural change, the facility must call the central office and ask for an extension or waiver. If this becomes a chronic problem and our education process is not working, a case can be developed and an investigation will follow. There can be a monetary fine, a ticket, a warning, or a letter of information, or we can bring a case before an administrative law judge and let it go through the process outlined in the Administrative Procedures Act.

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MK: What percentage of an inspector's time is spent on inspection of marine mammal facilities?

JG: Not all inspectors have marine mammal facilities within their (geographic) areas. Depending on the area, they inspect everything from laboratories to zoos. We have two categories of inspectors: veterinary medical officers (VMO's) and animal care inspectors (ACI's). Most strictly marine animal facilities, like aquariums, are inspected by veterinary medical officers. We have provided special training for those VMO's that are in areas where they do a lot of marine mammal work. The ACI's, by and large, have not had this training although several are from the display community. The VMO's with the most training and experience with marine mammals are located primarily in Florida and California, where most of these facilities are located.

MK: Are there programs that allow inspectors to specialize in marine mammals?

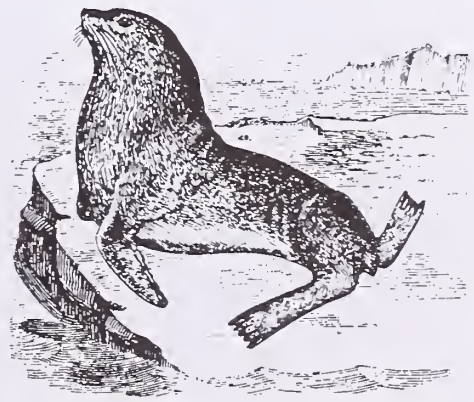
JG: We have provided some additional training for inspectors. We have a new course called "Water Quality." There is also a more general marine mammal course. This year we began a pilot cooperative internship program with the American Association of Zoological Parks and Aquariums that allows an ACI or VMO to spend up to 4 weeks at a facility to learn about enclosure design, animal nutrition, veterinary medicine, facility concerns, and funding. The inspectors are there to learn from the facility, not to inspect it. This kind of educational opportunity benefits us and the facilities.

MK: How can facilities assist APHIS in assessing animal well-being in the collections?

JG: I would like to encourage facilities to conduct more research and monitor animal behavior and preferences. We need more scientific support. Case in point is the issue of transport. We have mostly anecdotal information on the stress of transport of marine mammals. Sometimes it goes well and sometimes it doesn't. These are expensive and highly visible animals so it is in everyone's best interest to be concerned with not only the transport itself, but also the behavioral adjustments made by the animals, after transport, to ensure survival. I would encourage facilities to monitor an animal for 30 to 60 days to see if there is a link between transport and subsequent problems. We still know phenomenally little about keeping these species in captivity. Some pinniped species, on the other hand, have reproduced so successfully that their offspring are difficult to place and facilities must decide whether or not it's appropriate to allow these animals to be reproductively active. There is a real need for more documentation of successful husbandry and management techniques.

We are working informally with one institution that volunteered to determine shade requirements and preferences of pinnipeds. This is a topic that interests us, and we have been consulting with them on facility design. I would encourage institutions to investigate things like sound and filter system effects on acoustically sensitive animals or document behavioral responses and preferences to facility design. There is a whole range of areas in need of scientific information that will help us to better understand animals' needs. Although we cannot fund the research, we are enthusiastic and willing to collaborate and lend support to facilities that are interested in these kinds of projects.

Additional information about the internship program, the research program, or APHIS policy can be obtained from Dr. Garbe at (301) 436-7833 or U.S. Department of Agriculture, APHIS-REAC, 6505 Belcrest Rd., Federal Building, Rm. 567, Hyattsville, MD 20782. ■



Northern Sea-lion

A History of Cetaceans in Captivity in the United States

by
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"Mr. B., it's astonishing to what a number of purposes the ingenuity of us Yankees has applied to india-rubber," a woman remarked to P.T. Barnum upon doubting the authenticity of the pair of beluga whales (*Delphinapterus leucas*) housed in the basement of Barnum's American Museum (1). Maintaining and exhibiting cetaceans in captivity has reflected societal attitudes toward man's relationship with whales since the exhibition of the Nation's first belugas in 1861. Whales, once seen as curiosities, are now viewed as integral parts of natural ecosystems which must be managed in captivity to ensure successful conservation efforts in the wild.

The Emergence of the Aquarium

The aquarium grew out of the English drawing room fashion of collecting and maintaining ferns in a glass case. In 1850, Robert Warrington described the "aquarium principle" by which aquatic plants provide oxygen to ornamental fish in a similar glass case. As a result, he is credited with the invention of the "Warrington Case" or parlor aquarium. Collecting tidepool animals, such as anemones, for the home aquarium became a popular leisure activity at seashores. With the publication of several guides and handbooks and the emergence of aquatic plant and animal suppliers, the aquarium became a hobby that was exported to the United States (2,3).

A natural outgrowth of the home aquarium was the public aquarium. In the United States and Europe, metropolitan aquariums competed for the more exotic and unusual species that would attract visitors (2). Most people had only heard of whales through nursery rhymes, Bible stories, and literature such as Melville's *Moby Dick*, which was published in 1851. P.T. Barnum, no stranger to capturing the public's imagination, capitalized on the success of the aquarium. He arranged to have two belugas captured in the St. Lawrence River and transported by rail to his museum in New York. The whales were transported in long boxes containing salt water and seaweed and only survived a few months in the museum basement. Barnum attributed the loss to poor ventilation and lack of sea water. He also was unaware of the whales' normal diet. A new tank, billed as a "small ocean," was built on the second floor of the museum with pipes laid to the New York Harbor so fresh salt water could be pumped in. The exhibit was, according to Barnum's records, a square tank measuring 20 feet along each side with a slate floor and french plate glass. After having a Harvard professor verify the authenticity of two new whales, he advertised:

"...the Two Living Whales, measuring respectively 15 and 20 feet in length, may be seen at all hours sporting in their native element. Who will miss them? Another may not offer in a lifetime." (1)

It is believed that one of these whales was the first cetacean to be trained in captivity and could be hand-fed, wear a harness, and tow a woman in a car (4). Barnum's success at maintaining whales was minimal. Each pair was eventually replaced by another until the first Nile hippopotamus exhibited in America was given the vacant tank (1).

By the late 1870's, belugas and dolphins were being caught and supplied to aquariums and zoological gardens throughout the Eastern United States and Europe. Many animals died in transport crates similar to those used by Barnum. Dolphins arrived at their destinations dehydrated from lack of water, blistered from heat and sun during transport, and bruised or dead from thrashing in confining tubs (4, 5, 6).

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More than exhibit animals, society viewed cetaceans as a commodity. The Cape Hatteras Porpoise Fishery in North Carolina was a dolphin product producer. It harvested dolphins regularly (400 in 1913, 1,073 in 1914) for the oil found in their lower jaw as well as for their blubber. Lower jaw oil was particularly valuable as a lubricant for delicate machinery such as watches.

In 1913, Charles Townshend, director of the fledgling New York Aquarium, visited the Cape Hatteras Porpoise Fishery to acquire bottle-nosed dolphins (*Tursiops truncatus*) for the aquarium (6). Townshend was revolutionary in the development of marine mammal husbandry and maintenance because he recognized and documented, from a zoological perspective, the importance of water quality as well as behavioral and physiological indicators of distress. He ensured that, following capture, the animals were placed in a deep salt water pond on the beach for 24-hour observation and to allow them to calm down before shipment. They were placed in shipping tubs large enough to prevent rubbing and filled with cool salt water.

Like Barnum, Townshend used New York Harbor water which was pumped into a circular pool that was 37 feet in diameter and 7 feet deep. By late 1913, the pool supported five dolphins and a number of fishes. Although other marine mammal pools could be drained and scrubbed, cetacean pools could not since there were no holding tanks. Since there were no filter systems, pipes were added to increase the rate of waterflow to the tank to keep it clear. He described how water must be chilled in the summer and heated in the winter. His management was based on field observations of behavior, diet, and water quality (6). Townshend is credited with being the first to publish observations of cetaceans in captivity (4, 5), having documented conspecific (among individuals of the same species) aggression, play behavior, feeding behavior, and mating (6). He also recognized that the housing conditions were not optimal, and by 1916, the dolphins had died (4).

The Oceanarium

Zoos and aquariums operated on shoestring budgets in the early 1900's. Marine mammals attracted paying crowds, but the novelty was diminishing and turnover was high. Terrestrial animal maintenance and exhibition was and is less cost prohibitive than keeping a cetacean (7). However, in 1938, Marine Studios, which became Marineland of Florida in the 1970's, began to specialize in cetaceans. Originally established as a set for aquatic films, it had large tanks, which housed toothed whales, equipped with filter beds that utilized water directly from the sea (4, 5, 8). The oceanarium paid for itself through the presentation of trained cetaceans for visitors' enjoyment (8). The shows, which highlighted natural behavior with anthropomorphic sets and narration, were largely responsible for the paid staff that specialized in and wrote about cetacean husbandry, transport, medicine, and collection. In 1947, Marine Studios recorded the first cetacean birth in captivity—a calf was born to a bottle-nosed dolphin that was gestating at the time of capture (9).

Other commercial oceanaria opened in the 1950's such as Marineland of the Pacific in Los Angeles and the Miami Seaquarium, but all were tied to the ocean. With the opening of Seven Seas Panorama in Brookfield, Chicago, in 1961, the oceanarium came inland. New technologies were developed for artificial salt water, total and partial water filtration, and thermal control (7, 8).

In the 1960's, the public was seeing more species of cetacea as the number of oceanaria and aquariums increased. Facilities with multidisciplinary staffs, university researchers, as well as the U.S. Navy, were publishing information on behavior, physiology, reproduction, nutrition, and communication. It was becoming clear that the animals are highly intelligent, social, and in some cases, in danger of extinction. As the international campaign against whaling mounted, philosophical and ethical arguments developed that questioned the well-being of whales in captivity and the moral justification for their confinement (4, 5).

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The Marine Mammal Protection Act (MMPA)

The U.S. Congress passed the Marine Mammal Protection Act in 1972. The act did more than distribute permits for facilities to maintain marine mammals if they meet certain U.S. Department of Agriculture regulations on care and use, treatment, and transport. It expanded the knowledge base by increasing funding for research in captivity as well as in the wild. New methodologies for capture, control of water quality, and husbandry were developed. For the first time in many institutions, records were kept and standardized, and long-term captive breeding programs could be developed (4, 5, 10).

This research has been the source of increased sophistication and imagination in interactive educational exhibits that emphasize whale biology and conservation. For example, the Marine Mammal Pavilion at the National Aquarium in Baltimore uses models, computer simulations, video, and live animals to educate visitors.

Future for Cetaceans

In 1990, 102 facilities that were open to the public contained marine mammals—87 in the United States and 15 in Canada. There were 431 cetaceans on display representing 10 species (11). According to a survey by Asper et al. (1990), 26 percent were the result of breeding programs which compares to 8 percent in 1979. Bottle-nosed dolphins and harbor seals (*Phoca vitulina*) comprised 80 percent of the 1990 collections. In facilities where more than one animal was present, births were recorded for all cetacean species during the 1983 to 1990 census period. This included three species new to captivity—Commerson's dolphin (*Cephalorhynchus commersoni*), false killer whale (*Pseudorca crassidens*), and Pacific white-sided dolphin (*Lagenorhynchus obliquidens*).

As breeding programs and their resultant births continue to increase, the American Association of Zoological Parks and Aquariums (AAZPA) has taken an active role in management. Incorporated in 1972, the AAZPA developed a mandatory accreditation program for all facilities that wish to join. The program sets standards of animal management and husbandry for the purposes of conservation, education, research, and recreation (12). There are currently 160 accredited institutions (10). The marine mammal Taxon Advisory Group (TAG) is comprised of several AAZPA member institutions. Their role is to make policy recommendations to the AAZPA Wildlife Conservation Committee on how best to manage the captive population of marine mammals. This inter-institutional effort evaluates the carrying capacity of current facilities, identifies species that should be included in cooperative breeding programs, and which common species should be used as models for refining techniques that later can be used for management and husbandry of endangered species (13). They have developed nationwide education, information exchange, and conservation goals (14).

Studies on reproductive biology and microbial pathogens are essential for conservation, but difficult to conduct in field studies. However, these types of studies may be conducted using cetaceans at accredited institutions (9).

Cetaceans, once seen as curiosities that provided a Nation with fuel and lubricants, are now seen as social creatures, some of which are on the brink of extinction, that play an integral role in the health and vitality of the marine ecosystem. Today, zoos, aquaria, and oceanaria offer refuge and hope for these species by managing, studying, and breeding them in captivity. Lessons learned over less than 150 years are beginning to show great promise. Captive populations are growing and are being managed for genetic diversity so that, like some terrestrial animals, they may be reintroduced to the wild.

In August 1991, the New York Aquarium announced the births of two beluga calves. Other facilities have had captive births, but factors such as adult male aggression have limited the survivability of the young. The aquarium

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separated the male from the group, and the calves are now the oldest captive born belugas to survive in captivity (15). Townshend would have been proud.

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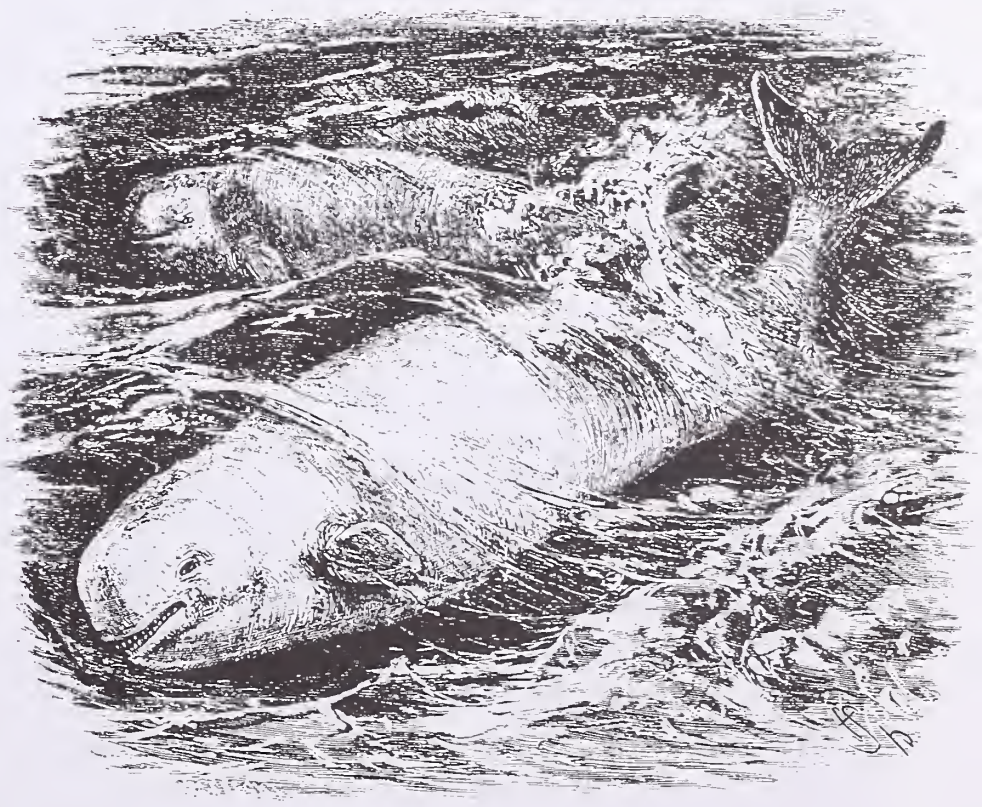

Chick Embryo Biology Information System

by
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Development of a comprehensive bibliographic database delineating applications of the chick embryo and its components in research and testing has been initiated at the University of Georgia College of Veterinary Medicine. The database has been termed the Chick Embryo Biology Information System or CEBIS. Current references to reports involving the chick embryo or its components are identified by searches conducted through MEDLINE and AGRICOLA database services. These references are added to the CEBIS database. Then the bibliography in each of these references is examined and pertinent references are added to CEBIS, if they are not already included in the database. Thus, citation indexing is an important approach to the growth of CEBIS. Primary emphasis has been placed on citations beginning with 1950, but some references go back to the early 1900's. The total number of references in the database at this time is 2,199. The majority of the references are in English, but non-English language journals are not excluded.

The current version of CEBIS resides in an Informix database. While Informix (Informix Software, Inc., Menlo Park, CA) is an extremely powerful relational database management system, the software is expensive and is not user-friendly. Therefore, CEBIS is being converted to a Reference Manager database. This is a microcomputer-based system designed specifically for management of bibliographic databases. The Informix CEBIS database is no longer being updated. A WordPerfect (5.1) file derived from this database is being reformatted for transfer of its contents to the Reference Manager CEBIS database.

Searches on specific topics (keywords) will be conducted on request without charge as long as the number of references identified by a search is small. For searches generating a larger number of references or involving a large number of keywords, a modest charge will be made. Keyword terminology in CEBIS is based on the *CAB Thesaurus*. The entire database will be available as a Reference Manager file at a cost dependent upon the number of references in CEBIS at the time of the request. A new user of the Reference Manager CEBIS database must purchase the Reference Manager software ($299; Research Information Systems, Inc., Carlsbad, CA) to enable the user to validate the database for access on his/her computer. Current objectives are to expand CEBIS to about 10,000 entries within the next 18 months and to include some information on the turkey embryo.

The chick embryo and its components have been used in an exceptionally wide variety of research and testing applications. Examples of applications include studies on effects of pathogenic microorganisms including the mumps virus, rabies virus, bluetongue virus, and *Brucella abortus* bacterium; evaluations of effects of toxins such as botulinum toxin, endotoxin, diphtheria toxin, aflatoxin, and snake -neurotoxin; and development of alternatives to the Draize rabbit eye irritancy test, e.g., the chick embryo chorioallantoic membrane assay. Many chick embryo cell culture systems have been used including those from the nervous system, kidney, cardiac and skeletal muscles, cartilage, trachea, lung, and feather follicles.

In developing CEBIS, special attention has been given to identification and indexing of techniques associated with use of the chick embryo or its components. These techniques range from simple procedures for opening eggs containing embryos to complex procedures for prolonged,

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dealer to transfer or market nonambulatory livestock, and for other purposes.

Introduced February 27, 1992, by Daniel Akaka (D-HI). Referred to the Subcommittee on Agricultural Research and General Legislation on March 18, 1992. This act may be cited as the "Downed Animal Protection Act of 1992." Nonambulatory livestock must be "humanely euthanized" by a rapid and effective means before any stockyard owner, market agency, or dealer may buy, sell, give, receive, transfer, market, or hold.

- **S. 2344 To improve the provision of health care and other services to veterans by the Department of Veterans Affairs, and for other purposes.**

Introduced March 12, 1992, by Alan Cranston (D-CA) and referred to the House Committee on Veterans' Affairs. Passed House with amendments on May 12, 1992. This act may be cited as the "Veterans Health Care Amendments Act of 1992." Amendments proposed in Section 208 provide quadriplegic veterans who have a service-connected disability with service dogs and veterans who have a service-connected hearing impairment with signal dogs.

- **H.J. Res. 429 Designating May 3, 1992, through May 9, 1992, as "Be Kind to Animals and National Pet Week."**

Introduced February 27, 1992, by Frank Guarini (D-NJ) and referred to the House Committee on Post Office and Civil Service. Referred to the Subcommittee on Census and Population on March 3, 1992. The people of the United States promote the responsible care of animals and pets and guard against cruel and irresponsible treatment. They are grateful to the veterinary medical profession for their roles in preventative and emergency medicine, pet population control, and education of pet owners. The people of the United States are also indebted to animal protection organizations, State humane organizations, and local animal care and control agencies for promoting respect for animals and pets; educating children about humane attitudes; and caring for lost, unwanted, abused, and abandoned animals.

- **S. 2391 To amend the Marine Mammal Protection Act to make improvements in the regulation of the importation of certain native articles of handicrafts and clothing.**

Introduced March 24, 1992, by Frank Murkowski (R-AK) and referred to the Committee on Commerce, Science, and Transportation. This act may be cited as the "Alaska Native Culture Protection Act." Section 3 of the Marine Mammal Protection Act (16 U.S.C. 1362) is amended to outline conditions in which Indians, Aleuts, or Eskimos may import marine mammal products.

- **H.R. 4483 To protect and promote stewardship of coral reef ecosystems.**

Introduced March 18, 1992, by Walter Jones (D-NC) and referred jointly to the Committees on Merchant Marine and Fisheries and Foreign Affairs. Referred to the Subcommittee on Oceanography, Great Lakes, and the Outer Continental Shelf. This act may be cited as the "Coral Reef Stewardship Act." Coral reefs are a major resource of marine biodiversity. The purpose of this act is to enhance protection and stewardship of coral reef ecosystems by providing deterrents to damaging coral reefs, promoting research and education on coral reef ecosystems and improving enforcement of multilateral agreements governing trade in wildlife products.

- **H. Res. 382 To express the sense of the House of Representatives that the United States should secure international agreements to ensure effective implementation of and compliance with United Nations General Assembly Resolution 46/215 calling for a worldwide ban on large-scale driftnet fishing.**

Introduced February 26, 1992, by Jolene Unsoeld (D-

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WA) and referred to the Committee on Merchant Marine and Fisheries. Referred to the Subcommittee on Fisheries and Wildlife and Conservation and the Environment on March 5, 1992. Large-scale driftnets indiscriminately kill thousands of endangered sea turtles, hundreds of thousands of marine mammals and seabirds, and millions of non-target fish. Congress resolves to secure international monitoring and enforcement of United Nations agreements calling for a moratorium on large-scale driftnets in the South Pacific Ocean.

- **S. 2491 To amend the Job Training Partnership Act to establish an Endangered Species Employment Transition Assistance Program, and for other purposes.**

Introduced March 31, 1992, by Mark Hatfield (R-OR) and referred to the Committee on Labor and Human Resources. Referred to the Subcommittee on Employment and Productivity on May 14, 1992. This act may be cited as the "Endangered Species Employment Transition Assistance Act of 1992." Amendments to the Job Training Partnership Act (29 U.S.C. 1662 et seq.), to authorize grants to be made available to provide training, adjustment assistance, and employment services to individuals that have been terminated or laid off as a result of compliance with the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), are outlined.

- **H.R. 4427 To prohibit the export of American black bear viscera, and for other purposes.**

Introduced March 11, 1992, by Helen Delich Bentley (R-MD) and referred jointly to the Committees on Foreign Affairs, Ways and Means, and Merchant Marine and Fisheries. Referred to the Subcommittee on Fisheries and Wildlife Conservation and the Environment on March 17, 1992. This act may be cited as the "Black Bear Protection Act of 1992." Export of American black bear viscera from the United States will be prohibited. The Secretary of the Interior shall prepare a report that describes the effectiveness of the Fish and Wildlife Service's computerized information systems in tracking importation or exportation of American black bear and other wildlife body parts.

- **S. 2178 To establish the Jemez National Recreation Area in the State of New Mexico, and for other purposes.**

Introduced February 3, 1992, by Jeff Bingaman (D-NM) and referred to the Committee on Energy and Natural Resources. Referred to the Subcommittee on Public Lands and National Parks on May 12, 1992. This act may be cited as the "Jemez National Recreation Area Establishment Act." The purpose of the act is to conserve, protect, and restore the recreational, ecological, cultural, religious, and wildlife resources of the Jemez Mountains. Section 4(e) discusses wildlife protection and conservation. ■

Cynthia Smith, Info. Specialist

TIMELY TOPICS ...

If you have suggestions for topics you would like to have addressed in the AWIC Newsletter, please contact Tim Allen, Editor, at 301-504-5174. AWIC welcomes any suggestions that relate to the humane treatment, proper care, and use of animals.

Announcements...

• WORKSHOP ON INFORMATION REQUIREMENTS AND THE ANIMAL WELFARE ACT

The Animal Welfare Information Center (AWIC) will hold a workshop on "Information Requirements and the Animal Welfare Act" on September 17 and 18, 1992, at the National Agricultural Library (NAL), Beltsville, Maryland. This 1½-day class will provide an introduction to NAL, AWIC and information requirements of the Animal Welfare Act (AWA). This class also offers an opportunity for participants to learn database search techniques. Individuals responsible for meeting the information needs of the AWA are invited to apply. **There is a limit of 10 people.** Please contact AWIC at (301) 504-6212 to request registration materials.

• ACLAM AUTOTUTORIAL PROGRAMS REVISED

The American College of Laboratory Animal Medicine (ACLAM) autotutorial programs are being completely revised. The original program series has been widely used in training veterinary students, technicians, and investigators. It was produced in the late 1970's and is out of date. ACLAM is working through the University of Washington Health Sciences Center for Educational Resources to produce this series of educational slide/tape programs. The programs will continue to serve as an introductory series on diseases of laboratory animals, but the revisions are undertaken with a view to enhance their usefulness in investigator and technician training.

The first eight programs of the series are now available. Six of the programs are on rabbits: Introduction to Use in Research; Care and Management in a Laboratory Setting; Biology; Noninfectious Diseases; Bacterial and Mycotic Diseases; and Parasitic, Protozoal and Viral Diseases. The other two deal with nonhuman primates – Environmental Enrichment, and Biosafety.

Four programs on guinea pigs will be included in the series – Use in Research and Biology; Care and Management; Infectious Diseases; and Noninfectious Diseases – and a program on the Mongolian gerbil.

There will be a total of 38 programs in the new series. Sets of programs will be available on rats and mice, hamsters, and nonhuman primates, in addition to those on rabbits and guinea pigs. There will be single programs on Alternatives, Laws and Regulations, Barrier Technology, Aquatic and Cold-Blooded Vertebrates, Dogs and Cats, Surgery in Rodents, and Transgenic Animals. It is anticipated that all of the programs will be ready by the end of 1992.

A more complete description of individual programs and ordering information may be obtained from the Health Sciences Center for Educational Resources Distribution, University of Washington, SB-56, Seattle, WA 98195, Phone (206) 685-1186.

• AAV ANNUAL CONFERENCE ADDS NEW PROGRAMS

In the New Orleans and AAV tradition, expect "a little something extra" (the conference theme is "lagniappe") at the 1992 Annual Conference of the Association of Avian Veterinarians (AAV). The conference will be held September 1-5 at the Sheraton New Orleans Hotel in New Orleans, Louisiana USA. New this year is a day-long program of advanced avian medicine topics. A shortened main conference will offer up to three concurrent sessions and a wider variety of programming than ever before. A full-day program on ratites is scheduled, plus presentations on pigeons, waterfowl, toucans, raptors, and passerines, and conservation reports. There will be case report sessions, posters, a chlamydia roundtable to answer practitioner questions about diagnosis and therapy, and non-infectious disease, and practice tips. There will also be a practitioner's question-and-answer forum addressing questions pre-submitted by registrants. New practical labs are soft tissue surgery and advanced therapy techniques, along with the ever-popular endoscopy, electrosurgery, radiology, orthopedic techniques, hematology, cytology, and basic techniques labs. The labs are for veterinarians and veterinary students, with several open to technicians. The technicians' 2-day program will include basic principals on the care of the critical patient, and advanced topics and clinical updates.

The new advanced avian medicine seminar has been designed to provide the experienced avian practitioner with indepth information on the mechanisms of various disease processes and their interaction with the avian host. The basic avian medicine symposium is a blend of practice and theory essential to the veterinarian looking for an introduction to and review of topics in avian medicine, and includes a review format for a complete body system (the respiratory system). Another new feature of the main conference is a day-long ratite program by known experts who will provide a review and update of techniques and procedures involving the veterinary care of ostriches, emus, and rheas, which are becoming more popular as economical or pet animals. The theme for the aviculture seminar, "Adult Breeder Management," will offer techniques and principles for selecting, housing, and breeding adult birds.

Combining all or part of the educational program with a Mardi Gras Gala, plenty of jazz, and tours before, during, and after the conference, registrants will have 5 days of educational and cultural opportunities unsurpassed in the field of avian medicine, surgery, and aviculture. "On the cutting edge", said Dr. Jeff Jenkins, this year's Conference Chairman, as he commented on the program developed by the Conference Committee,

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Education Chairman Dr. Scott McDonald, and education committee members, veterinarians Branson Ritchie, Michael Taylor, Susan Orosz, and Brian Speer.

Registration fees are substantially discounted for AAV members and veterinary students. July 1 is the cutoff date for new members to join AAV and register at member rates. July 15 is the cutoff date for the lowest registration rates. For complete registration and program information, contact the AAV Conference Office, 1625 So. Birch St., Suite. 106, Denver, Colorado USA 80222, (303) 756-8380 or Sylvia J. Kornelsen, (303) 756-8380.

• XXX. SCIENTIFIC MEETING OF GV-SOLAS SALZBURG, 22-25 SEPTEMBER 1992

The XXX. Scientific Meeting of GV-SOLAS of 1992 takes place September 22-25 in the Faculty of Natural Sciences of the University of Salzburg, Austria. The theme for this year's congress will be "Knowledge Protects Animals." The congress languages will be English and German.

8 different subjects will deal particularly with the 3R's – Replacement, Reduction and Refinement: Optimal husbandry for vertebrates and invertebrates; Standardization; Immunology, genetic and hygienic monitoring; Biological models; Supplementation and replacement methods; Electronic data processing; Behavioural physiology; Stress reduction; Nutrition; Law and animal protection.

The scientific program consists of invited lecturers (30 minutes), short lectures of 15 minutes, workshops (90 and 150 minutes) and posters with short lectures of 3 minutes (2 slides). The three best poster presentations will be honored.

Some of the main lectures are:

* What is species welfare? New concepts of laboratory animal husbandry (M. Stauffacher, Switzerland)
* Housing and behaviour of animals from the point of view of zoological garden (M. Martys, Austria)
* Choice of experimental animals and reproducibility of results (K. Gartner, Germany)
* Use of laboratory animals in toxicological research; Fish as scientific experimental being (A. Goldschmid, Austria)
* Animals as God's Creation (G. Holotik, Austria)

Additionally, workshops will be running in parallel to the main lectures. Some of the workshops planned are:

* Supplementary and replacement methods: Part I (P. Eckl, Austria) and part II (G. Bernatzky and S Renz, Austria)
* Planning, performing and evaluation of work on experimental animals (A. Lametschwandtner, Austria)

For more information contact:
Dr. G. Bernatzky
Naturwissenschaftliche Fakultat der Universitat Solzburg, Zentrale Tierhaltung, HellbrunnerstraBe 34, A-5020 Salzburg, Austria, Tel: 0662/8044-5627 Fax: 0662/8044-5698

• THE PROCTER & GAMBLE COMPANY
Animal Alternatives Research Program
A Call for Research Proposals

The Procter & Gamble Company is committed to the development and use of new methods for testing the efficacy and safety of drugs and consumer products that eliminate or reduce the use of animals or distress imposed on animals. The Animal Alternatives Research Program will provide funds for research to develop such methods.

Funding: Up to $50,000 annually for up to 3 years. Three such grants will be awarded.

Deadline for Application: September 1, 1992.

Announcement of Recipients: January 1, 1993.

Proposals will be accepted from any academic or non-profit medical research institution. The Company is interested in proposals in the following areas:

<u>Efficacy Testing</u>

* Inflammation/Arthritis
* Diseases of the Oral Cavity
* Nutritional and Gastrointestinal Disorders
* Cardiovascular Disorders
* Bone Disorders
* Skin Disorders
* Respiratory Diseases
* Rational Drug Design
* Structure-Activity Relationships

<u>Safety Testing</u>

* Ocular Irritation
* Acute Oral Toxicity
* Skin Irritation and Contact Sensitization
* Developmental Toxicity
* Respiratory Toxicity
* Neurotoxicity
* Computer Modeling of Toxicologic Processes
* Structure - Activity Relationships

Enquiries and requests for applications should be directed to:

Program Administrator
Animal Alternatives Research Program
The Procter & Gamble Company
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707
Fax (513) 627-1153 ■

D'Anna Berry, Info. Specialist

Upcoming Meetings...

1st International Conference of Animal Health Information Specialists, July 16-19, 1992. Reading, England. Contact: (217) 244-7659.

6th International Conference on Human Animal Interactions, Animals & Us, July 21-25, 1992, Montreal, Canada. Contact: (613) 747-0262.

Science Innovation '92, American Association for Advancement of Science, July 21-25, 1992. San Francisco, CA. Contact: (202) 326-6462 - Scott Pierce.

American Veterinary Medical Association (AVMA), August 1-5, 1992. Boston, MA. Contact: (708) 605-8070 - Bob Schlax, Convention Manager.

American Society of Animal Science (ASAS) Annual Meeting, August 8-11, 1992. Pittsburg, PA. Contact: (217) 356-3182 - Molly Kelley.

American Institute of Biological Sciences (AIBS) Annual Meeting, August 9-13, 1992. Honolulu, HI. Contact: (202) 628-1500 or 1-800-992-2427 - Louise Salmon.

American Chemical Society, "Natural and Derived Pest Management Agents," August 9-14,1992. Snowbird, UT. Contact: (601) 323-2230 - Paul Hedin.

39th Annual Pathology of Laboratory Animals, August 10-14, 1992. Bethesda, MD. Contact: (301) 427-5231 - Center for Advanced Medical Education.

Idaho State University, August 27-28, 1992. Pocatello, ID. Contact (208) 236-3895 -Jim Peck.

American Association for Laboratory Animal Science (AALAS) Northeast Regional Branch, September 9-10, 1992. Turf Valley, MD. Contact (301) 468-0250 - Betty Fatzie.

American Assoc. of Zoological Parks and Aquariums (AAZPA), September 13-17, 1992. Toronto, Canada. Contact: (304) 242-2160 - Barbara Ray or Beverly Beatty.

California Science Teachers Association Convention, October 2-4, 1992, San Jose, CA. Contact: (408) 453-6692 - Don Iman.

Seventh International Workshop on In Vitro Toxicology, October 5-9, 1992. De Haan, Belgium. Contact: W. Sonck 32-2-477.45.85.

National Science Teachers Association, Southwestern Area Convention. October 15-17, 1992. Ft. Worth, TX. Contact: (202) 328-0974.

American College of Toxicology, October 21-23, 1992, San Francisco, CA. Contact: (215) 443-8710 - Mildred S. Christian.

The Neurotrauma Society, 10th Annual Symposium, October 24-25, 1992, Anaheim, CA. Contact: (804) 794-9459 - Wendy Kidwell

Society for Neuroscience, October 25-30, 1992, Anaheim, CA. Contact: (202) 462-6688.

National Association of Biology Teacher, 1992 National Convention, November 11-15, 1992, Denver, CO. Contact: (703) 471-1134 - Michelle Robbins.

American Association of Zoo Veterinarians, November 14-19, 1992, Oakland, CA. Contact: (404) 727-7428 - Julie Fazollah.

National Science Teachers Association, Eastern Area Convention, November 19-21, 1992. New York, NY. Contact: (202) 328-0974.

National Science Teachers Association, Southeastern Area Convention, December 10-12, 1992. Charlotte, NC. Contact: (202) 328-0974.

International Animal Transportation Association (AATA) Conference, March 28-31, 1993, New Orleans, LA. Contact: (813) 879-3210 - Millie Woolf, President.

National Science Teachers Association, NSTA National Convention, April 1-4, 1993. Kansas City, MO. Contact: (202) 328-0974.

13th International World Congress of EEG and Clinical Neurophysiology, August 29-September 4, 1993, Vancouver, BC, Canada. Contact: (604) 681-5226 - Donald W. Paty, M.D.

15th World Congress on Neurology (WCN 93), September 4-10, 1993, Vancouver, BC, Canada. Contact: (604) 681-5226 - Donald W. Paty, M.D.

Second International Congress on Peer Review in Biomedical Publication, September 9-11, 1993, Chicago, IL. Contact: (312) 464-2432 - Annettte Flanagin.

World Congress on Alternatives and Animal Use in the Life Sciences, November 14-19, 1993, Baltimore, MD. Contact: (410)955-2959. ■

Jennifer Carter, Info. Support
D'Anna Berry, Info. Specialist

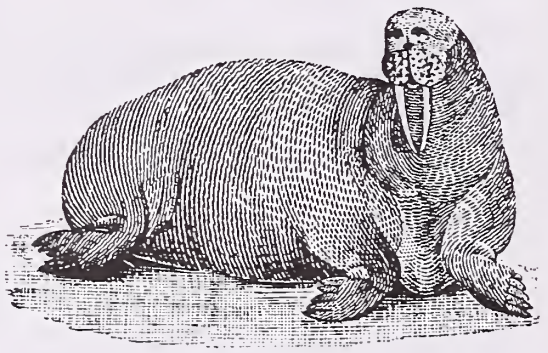
Common Harbor-seal

Chick Embryo cont'd from p.10

precision delivery of chemicals to embryos.

The CEBIS database should be useful in enhancing development of new applications for the chick embryo and its components in research and testing, in improving awareness of techniques for study of the chick embryo and its components, and in encouraging use of organ, tissue, and cell culture systems derived from the chick embryo as live animal alternatives. CEBIS is especially helpful in the preparation of an Animal Use Proposal for Institutional Animal Care and Use Committee (IACUC) review as it helps identify an alternative of chick embryo origin if one exists or it demonstrates objectively that a suitable alternative of chick embryo origin does not currently exist.

For more information on CEBIS contact:
The University of Georgia, College of Veterinary Medicine, Athens, GA 30602 or call (404) 542-3461.■



NEW PUBLICATIONS AND UPDATES AVAILABLE FROM AWIC...

- Environmental Enrichment Information Resources for Nonhuman Primates: 1987-1992
- Animal Welfare Legislation: Bills Submitted to the 102nd Congress 1991, AWIC Series #9 (Annual Report)
- Goat Production and Marketing in the United States, QB 92-23
- Gene Transfer in Animal Systems January 1985 - October 1991, QB 92-19

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