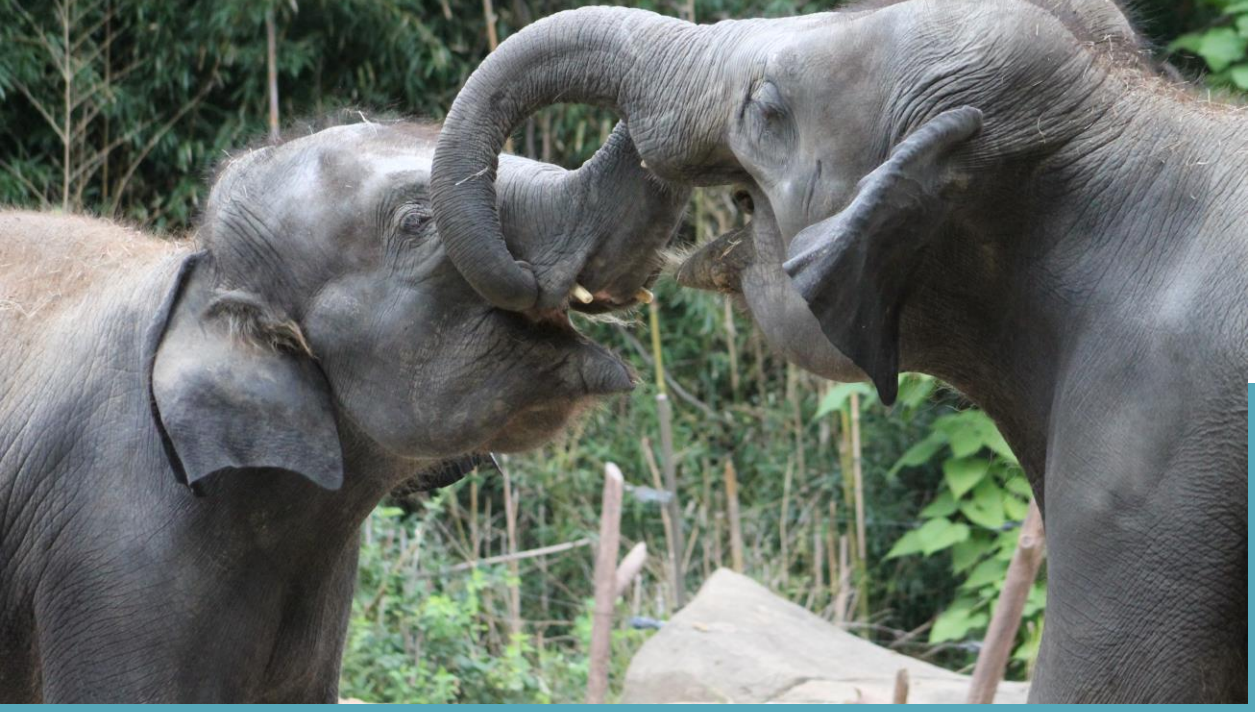

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THE EEHV CONSORTIUM
PO BOX 37012, MRC 5508,
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NEHL at the National Zoo
2016, Vol 3 #2

The EEHV Consortium at National Elephant Herpesvirus Laboratory Update

USEFUL LINKS FOR EEHV PREPARATION

- EEHV PLANNING PROTOCOLS
- EEHV TESTING LABORATORIES
- AGENDA AND ATTENDEES OF THE EEHV ADVISORY GROUP MEETING 2016.

ELEPHANTS BEING ELEPHANTS

Alexandra Ambrose with Gerry Creighton

Over the course of ten years, Dublin Zoo has completely remodeled their elephant habitat to reflect the protected contact method of care. As stated in Dublin Zoo's *Into the Future: The Evolution of Dublin Zoo's Asian Elephant Programme*, the Kaziranga Forest Trail habitat was created so that staff members could safely care for the elephants while preserving their "own natural ecology, biology, and behavior" (1).

Before the renovation, Dublin Zoo caretakers noticed that the elderly elephants housed at their zoo were becoming increasingly more difficult to treat and handle. In addition, the keepers were expressing concerns over their and the elephants' safety. The Zoo faced a decision: either convert the elephant habitat, or end the elephant program. These concerns, along with the European Association of Zoos and Aquariums' (EAZA) push towards protected contact, solidified Dublin Zoo's decision to renovate the habitat to become completely protected contact.

Through multiple stages, Dublin Zoo has built a new facility to provide the very highest standards of modern husbandry techniques and elephant care. The zoo uses sand

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PHOTO COURTESY OF DUBLIN ZOO

Dublin Zoo: Elephants being Elephants

Continued from Page 1

instead of concrete in both the indoor and outdoor facilities. Deep sand stimulates rigorous exercise, and additionally allows elephants to use the sand to lie down, dig, and throw. Sand also supports birthing and post-birthing processes, allowing newborns to stand up quickly themselves with little to no human intervention, due to the absorbent qualities of the sand. This, in turn, reduces the stress state of the birthing elephant. Similarly, the use of hanging feed nets stimulates exercise because it encourages use of the elephant's shoulder and neck muscles. The staffers utilize CCTV monitoring for observational research of elephant activity, such as sleeping and behavioral patterns, and to observe the birthing process without interference. Finally, Dublin Zoo wants the outdoor habitat to be "a new experience for the elephants every day." They accomplish this through thoughtful alteration of terrain, as well as by adding wildlife like Asian antelopes and peacocks to create an enriching environment as true to nature as possible.

Dublin Zoo has garnered great success in having a well-integrated herd because of the improved elephant habitat. It is important to note that the herd is multi-generational, an aspect that Dublin Zoo deems crucial for progressive elephant management. Having a herd that works well together is imperative to the Dublin Zoo program's success because the elephants solve behavioral problems themselves, without the trainers intervening to separate unruly elephants from the group.

Originally, the herd consisted of two adult females, one with a calf and the other pregnant. By 2014, the herd grew to eight, including Upali, an 18-year-old bull. The herd had pre-existing comfortable relationships, and the addition of Upali's calm demeanor only increased harmony within the group.

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With the growth of the herd, there also grew concern regarding the possibility of disease and illness. EEHV is "…after reproductive management, the most important limitation for successful management of captive populations." (2). Gerry Creighton, the Operations Manager from the Dublin Zoo, stresses his belief that a sick EEHV calf would be detrimental to the harmony of the herd: "…when considering their closeness, their psychological wellness comes first as a herd". Though the Dublin Zoo has not had a case of EEHV hemorrhagic disease (EEHV HD) in the herd, they are aware that it is always a possibility for any breeding herd of Asian elephants.

When staff members learn the detailed training protocol and work with the elephants, there is a clear positive effect that the protected contact (PC) method has on both parties. The elephants are free to decide themselves

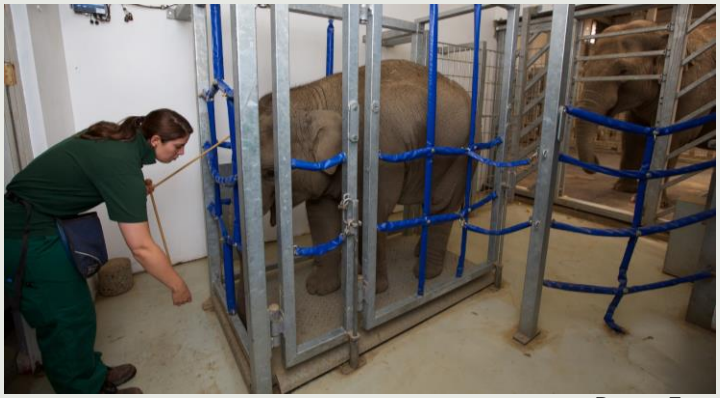

PHOTO COURTESY OF DUBLIN ZOO

whether they want to move towards the training wall. In return, trainers are working with calmer animals. Creighton says, "We generally never have a problem about the herd not training because it's about giving them the best option to make a decision on their terms…coming into the training wall or crèche is exciting and rewarding".

The calves are trained for husbandry and veterinary procedures (oral checks, swabs, blood draws, rectal fluids) in a specially built training crèche, which allows the dam, in the main training area adjacent to the crèche, to check on the calf. One of the earliest behaviors that is trained is for the calf to "back up" out of the crèche, so that calf and dam can be reassured by visual contact with each other.

Dublin Zoo has an EEHV protocol and "go-to-guide" in case EEHV is detected in blood or clinical signs appear. The protocol lays out what staff members should do to treat the sick elephant using "specific behaviors within the herd… as well as the individual." Included in this guide are instructions such as how to perform daily health checks, as well as weekly blood sampling. By so doing, they hope to achieve early detection of viral levels in order to treat the elephant as quickly as possible, which could lead to increased survival (3). The Zoo is participating in a comparative study of the efficacy of oral and conjunctival swabs compared to trunk wash collections in the detection of EEHV shedding. Other study members are the Smithsonian's National Zoo EEHV Lab, the Cummings School of Veterinary Medicine at Tufts University and the Irish Equine Centre.

In watching the calves playing in a mud wallow or seeing how integrated the herd is, the benefits of a protected contact environment are clear. Other zoos are enacting similar measures to Dublin Zoo based on the successes seen in protected contact zoos. The Association of Zoos and Aquariums (AZA) in the United States has enacted a rule that accreditation will only be given to zoos that have protected contact habitats, further encouraging renovations. The successful care of elephants with this method is unmistakable.

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Recent EEHV Publications

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The Rosamond Gifford Zoo at Burnet Park

Saint Louis Zoo

San Diego Zoo Global

Smithsonian's National Zoo and Conservation Biology Institute

The Tulsa Zoo

Utah's Hogle Zoo

Woodland Park Zoo

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RECENT & UPCOMING MEETINGS

CLICK ON THE HYPERLINKED MEETING NAMES BELOW FOR MORE INFORMATION—MEETING PROCEEDINGS OR REGISTRATION INFORMATION.

First European EEHV Research Workshop. Rotterdam Zoo, May 19-20, 2016 Oceanium – Haaienzaal.

2nd EEHV Advisory Group meeting, in conjunction with the annual meeting of the AAZV/EAZV, Atlanta, GA, July 23, 2016.

15th International Elephant and Rhino Conservation and Research Symposium, Singapore Zoo, Nov 14-18, 2016, hosted by Wildlife Reserves Singapore, presented by International Elephant Foundation and International Rhino Foundation.

2nd annual Southeast Asia EEHV symposium. This is still in the planning stages; it will be just after the IEF meeting listed above and will be invitational only. The meeting will be hosted by Wildlife Reserves Singapore; organizer is Sonya Luz.

11th International Elephant Endotheliotropic Herpesvirus (EEHV) Workshop. May 15-17, 2017, Zoological Society of London (ZSL), London Zoo, London. Organizers: Akbar Dastjerdi, Fieke Molenaar