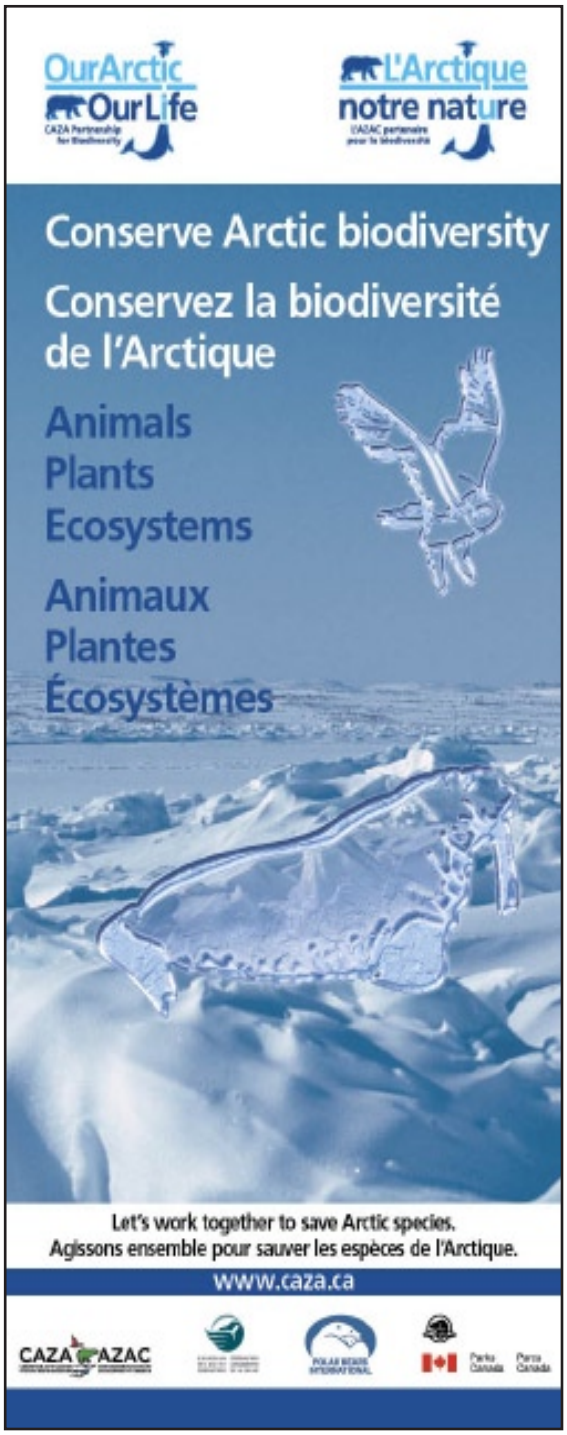
CAZA AZAC
CANADIAN ASSOCIATION OF ZOOS AND AQUARIUMS
ASSOCIATION DES ZOOS ET AQUARIUMS DU CANADA

12/ 10 NEWSLETTER | BULLETIN

CONTENTS

MISSION STATEMENT

Unite the Canadian Zoo and Aquarium community in connecting people to nature through demonstrating dedication to conservation and excellence in animal care.



UNCOVERING THE WINTERING GROUNDS OF THE EASTERN LOGGERHEAD SHRIKE

Editors Note: CAZA, through its Conservation Fund, has supported a number of research projects. The following two articles provide information on some of the sponsored projects.

Each fall, as the days shorten and the temperatures drop, the black-masked Eastern Loggerhead Shrike (Lanius ludovicianus migrans) heads south. Unfortunately, we know very little more than that about its migration routes or overwintering locations. Yet the threats that shrikes encounter between September and April could hold the secret to protecting this endangered bird.

While habitat stewardship and a captive breeding and release program carried out by Wildlife Preservation Canada, the Toronto Zoo, and new partner African Lion Safari have helped to increase the size of the wild population, the biggest factors keeping shrike numbers low — just 31 pairs in 2009 — could lie in overwintering and migration.

Through banding efforts and genetic and stable isotope analysis, we've been able to narrow down the most likely location to the agricultural areas of Arkansas, Mississippi, Louisiana, Tennessee, Texas and Florida. Now, a CAZA-funded geolocator study should provide the more detailed

UNCOVERING THE WINTERING GROUNDS OF THE EASTERN LOGGERHEAD SHRIKE

information we need.

Geolocators are data loggers that continuously record light levels. Recent technological advances have made them small and light enough to use successfully with smaller songbirds such as purple martins and wood thrush. Now, we're attempting to use them with captive-bred shrikes released from our Ontario field sites on Carden Plain and the Bruce Peninsula.

Since the geolocators don't emit data, they must be retrieved to capture their information. The fact that between one and five captive-bred shrikes return to the Ontario breeding grounds the year after their release makes this a realistic possibility.

Once the geolocators have been retrieved, special software can decode the sunrise and sunset times they have recorded to give us the timing and routes of migration and the location of the wintering grounds.

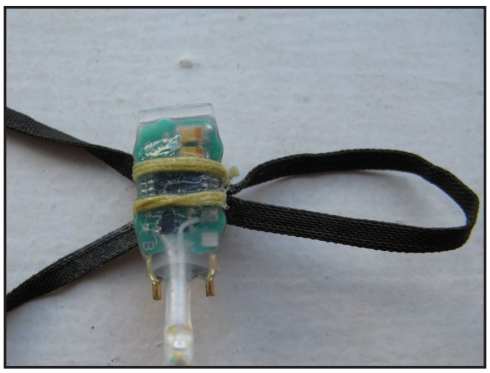
In 2009, we released 49 captive-bred birds equipped with geolocators, attached to their backs using a harness that loops around their legs. Excitement ran high the following summer, when two captive-bred birds returned to Carden Plain with harnesses intact.

That excitement turned to disappointment, however, after we retrieved the geolocators and discovered that both had prematurely stopped recording. A manufacturer's inspection revealed no apparent reason for the malfunction. Since currently geolocators have only about an 80 per cent success rate in the field, we chalked up the double failure to simple bad luck.

In both cases, the geolocators stopped working by day 57. According to the data, both birds were still in the Carden area at that point, giving us no new insights into their migration routes or destination.

"While these weren't the results we were hoping for, we have proved that the project design is sound," says Elaine Williams, Executive Director of Wildlife Preservation Canada. "The data that was captured proved to be very clean, and the return of two shrikes clearly demonstrates that the geolocators don't interfere with their migration."

We therefore continued the study this year, releasing approximately 50 birds bearing geolocators. "If all goes well, we'll have the data we need in early summer so that we can begin identifying collaborators in the appropriate areas of the U.S. and investigating the best ways to ensure that shrikes survive the winter," says Williams.



Geolocator assembly with Teflon ribbon, using figure-8 leg loop harness design (Photo: Jessica Steiner)

Juvenile captive Eastern Loggerhead Shrike, Lanius ludovicianus migrans, wearing geolocator. (Photo: Jessica Steiner)

SPINY SOFTSHELL TURTLES GOING HOME

In Québec, the survival of the Spiny softshell turtle (Apalone spinifera) is threatened. Egg and hatchling predation, combined with nests flooding result in a low recruitment rate. Various strategies have been implemented to minimize this problem. The Zoo de Granby participates in an artificial incubation program where eggs are collected in situ and hatchlings released at the nesting site.

For the first time in Québec, researchers from the Zoo de Granby and the Zoo Ecomuseum, succeeded in artificially incubating eggs of Spiny softshell turtles, as part of an in situ conservation project. In mid-August, 14 hatchlings were released in the Rivière-aux-Brochets were they joined 25 more young turtles released earlier in July. Situated 60 km south from Montreal, the Rivière-aux-Brochets is one of Lake Champlain's tributaries.

The release of these young turtles is a new step forward for the Québec Spiny Softshell Turtle Recovery Team. The project's objective aims at minimizing certain environmental conditions impacting the eggs' survival, such as predation and flooding. Thus, this last June, a team from the Zoo de Granby and an intern from the Québec Ministry of Natural Resources and Wildlife (MNRW) spent the whole month observing females laying their eggs on islets in the Rivière-aux-Brochets. Biologists collected 74 eggs from 4 different nests on the river shore. Three more nests were left in situ.

At both institutions, the eggs were artificially incubated for about 60 days under ambient temperatures of 27-28ºC and humidity levels of 85-90%. Overall, a total of 61 hatchlings were released this summer, thanks to these collaborative efforts.

In Québec, the Spiny softhsell turtle is a threatened

LES TORTUES-MOLLES À ÉPINES RENTRENT AU BERCAIL

La tortue-molle à épines (Apalone spinifera) au Québec a un statut d'espèce menacée. La prédation des œufs et des jeunes ainsi que l'inondation des nids résultent en un faible taux de recrutement de l'espèce. Des stratégies ont été implantées afin de contrecarrer ce problème. Le Zoo de Granby fait partie de l'équipe de rétablissement de cette espèce au Québec, et collabore à un programme d'incubation artificielle d'œufs prélevés en nature et de relâche des nouveau-nés.

Pour la première fois au Québec, des chercheurs du Zoo de Granby et du Zoo Ecomuseum ont réussi l'incubation artificielle d'œufs de tortue-molle à épines dans le cadre d'un projet de conservation de l'espèce en nature. Le 11 août dernier, onze nouveau-nés ont été remis en nature dans la région du Lac Champlain. Ils sont allés rejoindre les vingt-cinq autres jeunes tortues qui ont été relâchées en juillet dans la rivière-aux-Brochets, une des rivières se jetant dans le Lac Champlain au Québec.

La relâche de jeunes tortues-molles est une nouvelle étape franchie pour l'équipe de rétablissement de cette espèce au Québec. L'opération vise à pallier certaines conditions défavorables aux sites de ponte, qui affectent la survie des œufs. Ainsi, en juin dernier, les spécialistes ont prélevé 74 œufs de tortues provenant de quatre nids aux abords de la rivière-aux-brochets. Trois autres nids ont été laissés sur le site de ponte. Pour se faire, une équipe du Zoo de Granby aidée d'une stagiaire du Ministère des Ressources naturelles et de la Faune du Québec (MNRF) a observé les femelles pondre sur quelques îlots de la rivières-aux-Brochets en Montérégie, à environ 60 km au sud de Montréal.

Dans les deux institutions accréditées, les œufs ont été placés en incubation artificielle pendant environ 60 jours sous des températures de 27 à 28ºC et une humidité relative à 85-90%. Ces derniers ont donc été à l'abri de la prédation et des crues, deux éléments qui menacent la survie des œufs en nature. D'autres remises à l'eau ont été effectuées dans le courant du mois d'août pour un total de 61 petites tortues-molle à épine remises en nature.

SPINY SOFTSHELL TURTLES GOING HOME

species and is legally protected. The first recovery plan was developed in 1997 by the Québec Ministry of Natural Resources and Wildlife (MNRW) and its partners, Environment Canada, the Zoo Ecomuseum, Amphibia-Nature, the Organisme du bassin Versant de la Baie Missisquoi, Nature Conservation Canada, and the Zoo de Granby. The main objectives are to protect the species' habitats and to insure the long-term survival of the population of the Lake Champlain region. As clearly stated by the MNRW, the size of the species' habitats is decreasing due to human activities such as the modification of shorelines, poor water quality, and nautical activities. The Spiny shoftshell turtle would have a poor capacity to adapt to changes in its environment, making it especially vulnerable to these threats. Public education is one the key actions in the recovery plan; since 2002, the Zoo de Granby has been participating in educational activities attended by thousands of residents and vacationers in the Lake Champlain and the Montérégie regions.

The Zoo de Granby is very proud to participate to the recovery efforts of the Spiny softshell turtle, and we wish to thank the Canadian Association of Zoo and Aquariums (CAZA), the Canadian Wildlife Federation (CWF), and the Fondation de la faune du Québec (FFQ) for their support in this conservation project.

Patrick Paré
Director, education, research and environment
Zoo de Granby

LES TORTUES-MOLLES À ÉPINES RENTRENT AU BERCAIL

La tortue-molle à épines est une espèce menacée au Québec. La démarche de rétablissement s'inscrit dans un plan d'intervention mis en œuvre en 1997 par le MRNF et ses partenaires, Environnement Canada, le Zoo Ecomuseum, Amphibia-nature, l'Organisme de bassin Versant de la Baie Missisquoi, Nature Conservation Canada et le Zoo de Granby. Le but est d'assurer la protection des habitats pour l'espèce et de maintenir à long terme les populations de tortues-molles à épines au Lac Champlain ainsi qu'aux abords d'autres plans d'eau. Selon le ministère des Ressources naturelles et de la Faune (MRNF), les habitats utilisés par l'espèce sont réduits par l'augmentation des activités humaines comme la modification des rives ou de la qualité de l'eau et le nautisme. Selon la biologie de l'animal, elle ne possèderait qu'une faible capacité d'adaptation aux changements de conditions de son milieu. C'est pourquoi le Zoo de Granby a aussi entrepris des actions de sensibilisation dans la région du Lac Champlain et en Montérégie qui ont permis de joindre des milliers de résidents et de villégiateurs depuis 2002.

Le Zoo de Granby est très fier de participer aux efforts de rétablissement de la tortue-molle à épines, et tient à remercier l'association des zoos et aquariums du Canada (AZAC), la Fédération canadienne de la Faune (FCF) et la Fondation de la Faune du Québec (FFQ) pour leur soutien dans ce projet de conservation.

Patrick Paré
Directeur, éducation, recherche et environnement
Zoo de Granby

FROM THE PRESIDENTS DESK LA PLUME DU PRÉSIDENT

Robin Hale

I want to take this first opportunity as the incoming President of the Canadian Association of Zoos and Aquariums to let you know how honoured I am to take on this major responsibility, particularly as I am following in the footsteps of a truly talented leader – Rachel Léger.

I am very enthusiastic about assuming the task of leading CAZA for the next two years, and at the same time am awed by the intensive work program that is before us. I am absolutely convinced that it can only be realized with your full collaboration and involvement, and I look forward to meeting and speaking with many of you over the next few years as we address the challenges and opportunities that confront us in this challenging profession.

I do want to pay tribute to Rachel, my predecessor. She truly did an amazing job as our President and we all owe her our gratitude for what she was able to accomplish during her term of office. Just stop to think for a moment about how our Association has grown and matured in the past several years – a great deal of the credit for this is due to Mme.

Je veux profiter de cette première occasion, en tant que nouveau président de l'Association des zoos et aquariums du Canada, pour vous faire savoir combien je suis honoré d'assumer cette grande responsabilité, surtout que je suis dans le sillage d'un leader vraiment talentueux - Rachel Léger.

Je suis très enthousiaste dans ma tâche de diriger l'AZAC durant les deux prochaines années, et je suis en même temps impressionné par le programme de travail intensif qui se présente à nous. Je suis absolument convaincu qu'il ne peut être réalisé qu'avec votre entière collaboration et votre participation, et je suis impatient de rencontrer beaucoup d'entre vous et de discuter au cours des prochaines années, alors que nous relevons les défis et opportunités auxquels nous sommes confrontés dans ce métier difficile.

Je tiens à rendre hommage à Rachel, mon prédécesseur. Elle a vraiment fait un travail incroyable et nous lui devons tous notre gratitude pour ce qu'elle a accompli au cours de son mandat. Il suffit de penser à la façon dont notre Association a grandi et mûri ces dernières années - une grande partie du crédit pour cela est dû à Mme Léger. Sa capacité à relever des défis de taille tout en ne perdant jamais son sang-froid s'est peut-être mieux illustrée au congrès qui vient de s'achever à Montréal. En dépit de la réalité et de la menace de grève et de boycott, elle a réussi à mettre sur pied un congrès de premier ordre qui dépassait de loin les attentes - tout en exerçant d'importants travaux de rénovation et de mise à niveau au Biodôme. Quelle réussite!

En même temps je tiens à souhaiter la bienvenue aux nouveaux membres du Conseil d'administration de l'AZAC - Josée Tremblay de Saint-Félicien et Joanne Lalumière de Granby (qui est avec nous pour un second tour). Je sais qu'elles et les autres membres du Conseil travailleront assidûment à tenir nos engagements au cours des prochaines années.

FROM THE PRESIDENTS DESK

Léger. Her ability to take on daunting challenges while never losing her cool is perhaps best exemplified by the amazing conference just concluded in Montreal. Despite the reality and the threat of strike and boycott she managed to put together a first rate conference that far exceeded expectations - while also carrying out a major renovation and upgrade at the Biodome. Quelle réussite!

At the same time I want to extend a warm welcome to the new members of the CAZA Board of Directors – Josée Tremblay from St. Félicien and Joanne Lalumière from Granby (who is with us for a second round). I know that they, with the other members of the Board, will work assiduously to deliver on our commitments over the next several years.

I'd like to briefly sketch out some of our priorities for the near term:

- CAZA's accreditation program continues to be the bedrock of our Association and the basis for the solid public reputation that we enjoy. As always we will continue to upgrade our standards as new knowledge becomes available, but at the same time we will be implementing a significant change in the manner in which it is implemented. We are moving to a quantified, digitized inspection process that will give us more objectivity in our assessment of applicants, and also introducing a mandatory mid-term inspection for facilities that are identified as having deficiencies that need to be addressed. As we move forward in persuading governments to accept CAZA accreditation as the basis for the operation of zoos and aquariums in Canada, this move to a more objective, credible assessment is extremely important.

- We'll also be introducing a fully thought-through process for assessing applications for affiliate status – this in response to interest expressed by a

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Je voudrais brièvement esquisser certaines de nos priorités pour le court terme :

- Le programme d'accréditation de l'AZAC continue d'être le fondement de notre Association et de notre réputation auprès du public. Comme toujours, nous continuerons à améliorer nos normes au fur et à mesure que de nouvelles connaissances sont disponibles, mais en même temps, nous mettrons en oeuvre un changement significatif dans la manière de procéder. Nous nous dirigeons vers un processus d'inspection quantifié, numérisé, qui donnera plus d'objectivité à notre évaluation des candidats ; nous introduisons aussi une inspection obligatoire à mi-parcours pour les établissements identifiés comme ayant des lacunes qui doivent être abordées. Alors que nous faisons des progrès pour persuader les gouvernements d'accepter l'accréditation de l'AZAC comme exigence pour l'opération de zoos et aquariums au Canada, ce passage à une évaluation plus objective, une évaluation crédible, est extrêmement important.

- Nous allons aussi introduire un processus d'évaluation bien pensé pour les demandes de statut de société affiliée - ceci en réponse à l'intérêt exprimé par un certain nombre d'établissements à travers le pays.

- Nous allons procéder à une révision de nos statuts, qui sera achevée à temps pour la présentation à l'AGA de l'an prochain. Ceci est en partie en réponse à une nouvelle loi fédérale qui entrera en vigueur l'an prochain, mais ceci nous permettra également de mettre à jour les dispositions relatives à nos différentes catégories de membres, etc. Nous vous tiendrons au courant de ce travail.

number of facilities across the country.

- We will be carrying out a review of our bylaws, to be completed in time for presentation at next year's AGM. This is in part in response to new federal legislation that comes into force next year, but it will also permit us to bring up to date the provisions with respect to our various classes of membership, etc. We will keep you fully posted as this work proceeds.

- There's also a lot of work to be done in carrying out a full review of our conservation activities. We've had considerable discussion about this – the degree to which we prioritize our Canadian Endangered Species Program, whether we can or should reinvigorate the CCP, and indeed how we support other worthwhile conservation initiatives in Canada and elsewhere. The first step in this review is a workshop being put together for later January in Toronto. Advice from this grouping of experts will be reviewed, and we will be sure to seek your opinions as we proceed.

- One of the keys to supporting worthwhile conservation projects is, of course, the necessary funding. We've had considerable success in recent years in raising money from sponsors like Marks Work Wearhouse and others, but we've always recognized that this type of coupon-related funding is not ideal for our organization; it works for some of our members but causes headaches for others. We're all in agreement, I believe, that answer lies in what is known as cause-related fundraising – recruitment of corporate or other interests that choose to be involved with good causes – and certainly the preservation of threatened and endangered species qualifies as exactly that. I've asked Joanne Lalumière to lead this work with her Business Development Committee.

- Il y a aussi beaucoup de travail à faire dans la réalisation d'un examen complet de nos activités de conservation. Nous avons eu des discussions à ce sujet – quelle priorité accorder à notre programme pour les espèces canadiennes en voie de disparition ; si nous pouvons ou devrions redynamiser le PCC, et même la façon dont nous soutenons d'autres initiatives de conservation au Canada et ailleurs. La première étape de cet examen sera un atelier en janvier à Toronto. Les conseils de ce groupe d'experts seront examinés, et nous ne manquerons pas de demander votre avis alors que nous progressons.

- Le moyen clé de soutenir des projets de conservation est, bien sûr, le financement nécessaire. Nous avons eu un succès considérable ces dernières années avec des commandites comme celle de Mark's Work Wearhouse - L'équipeur et autres, mais nous avons toujours reconnu que ce type de financement lié à des coupons n'est pas idéal pour notre organisme ; il fonctionne pour certains de nos membres, mais crée des problèmes pour d'autres. Nous sommes tous d'accord, je crois, que la réponse réside dans la collecte de fonds liée à une cause - le recrutement d'entreprises ou autres qui choisissent de participer à de bonnes causes - et la préservation des espèces menacées et en voie de disparition est certainement considérée comme exactement ça. J'ai demandé à Joanne Lalumière de gérer ce travail avec son comité d'expansion des affaires.

- Notre crédibilité auprès du public et des responsables et décideurs au sein du gouvernement est un fondement essentiel de notre Association. Nous allons continuer à mettre en oeuvre un programme pour médias et relations publiques et nous comptons sur votre active participation. Nous allons aussi continuer notre travail à div-

FROM THE PRESIDENTS DESK

- Credibility with both the public and with policy and decision makers in government is a vital underpinning of our Association. We will be continuing to implement a proactive media and public relations program with your active involvement. And we'll be continuing our work at various levels of government to ensure that both officials and politicians are increasingly made aware of the vital importance of our industry and the contribution it makes to our society and economy.

- And, finally, we are making a number of important improvements in the handling of our finances as an Association. Again, we'll be reporting fully on that in the coming months.

I really do want to encourage all of you to get involved with CAZA. There's lots of opportunity, given the work program I've just sketched out. I would encourage you to look at the Board's committee lineup elsewhere in this issue of the newsletter, identify the work that is important to you and to your institution, and get in touch with the appropriate committee chair. They will welcome both your interest and readiness to contribute.

This is your Association. You can make it work.

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ers paliers de gouvernement afin de s'assurer que les fonctionnaires et les politiciens sont de plus en plus sensibilisés à l'importance vitale de notre industrie et à la contribution qu'elle apporte à notre société et à l'économie.

- Finalement, nous faisons un certain nombre d'améliorations importantes dans la gestion des finances de l'Association. Encore une fois, nous ferons rapport sur cela dans les mois à venir.

Je veux vraiment vous encourage tous à participer à l'AZAC. Il y a beaucoup d'occasions de vous impliquer, compte tenu du programme de travail que je viens d'esquisser. Je vous encourage à consulter la liste des comités dans ce numéro du bulletin d'information, à identifier le travail qui est important pour vous et votre établissement, et à entrer en contact avec le comité approprié. Ils accueilleront votre intérêt et votre empressement à contribuer.

Il s'agit de votre Association. Vous pouvez la faire fonctionner.

PURSUING BIODIVERSITY CONSERVATION AT THE ASSINIBOINE PARK ZOO

Dr. Robert Wrigley, Zoo Curator

Introduction

"Biodiversity in Jeopardy – Where do we fit?" This year's CAZA Conference theme epitomizes the crossroads where zoos and aquariums find themselves in the face of escalating dire news in the fields of wildlife conservation and environmental health. The challenges of researching and preserving biodiversity, in our own regions or in other countries, are so daunting that we as zoo and aquarium biologists, managers and animal-care staff must make well-thought-out decisions on how we may best contribute. Of course these decisions are affected by a number of factors such as institutional priorities, personnel expertise and interests, travel budgets, field logistics, and time available to pursue such programs.

Other than providing an occasional grant to a conservation fund (e.g., Snow Leopard Trust) and our staff participation in the American Association of Zoo Keepers "Rummaging for Rhinos" fund-raising program, the Assiniboine Park Zoo has not been in a position to carry out major conservation projects in other countries. Consequently, we have focused our activities within Manitoba, and on participation in formal breeding programs (SSPs, CCPs, EEPs) hosted by international zoo organizations. This paper highlights the various biodiversity-related programs at our Zoo and in partnership with a number of other local conservation groups. I offer my own experiences and perspectives while working for over four decades in the fields of conservation, ecology and interpretation. I hope these examples will encourage especially new zoo/aquarium staff to seek out new and innovative ways of being involved in the conservation movement of wildlife and wild lands.

Formal Breeding Programs

The Assiniboine Park Zoo has been participating for decades in 63 formal animal-breeding programs, including 3 Canadian Collection Plans, 16 American Zoo and Aquarium Association Species Survival Plans, 33 AZA Population Management Plans, 1 European Endangered Species Program, and 10 regional and international Studbooks. As examples, the Zoo was a founding member of several Species Survival Programs (e.g., Siberian Tiger) and we have been successful in breeding (at APZ and with specimens on loan) 145 Lion-tailed Macaques, 23 Grey Gibbons, 10 Red Pandas, 34 Snow Leopards, and 154 Afghanistan Markhor – all critically endangered species. These offspring have been distributed to dozens of zoos around the world. Animal Collections Manager Phil King has been instrumental in maintaining the Zoo's participation and registration in these breeding programs, and the entire animal collection, covering a span of 106 years, has been entered into the ISIS inventory. This places the Assiniboine Park Zoo within the top 6% of world zoos in degree of record completion – a remarkable achievement by a dedicated zoo professional.

The Assiniboine Park Zoo was a founding member of several AZA Species Survival Programs, such as the Siberian Tiger SSP.

We are currently finalizing an exchange with the Sakkarbaug Zoo in India which will create a North American cap-

tive-breeding plan for the critically endangered Asiatic Lion. This will augment existing breeding plans in India and Europe, totaling about 100 individuals (only 300 remain in the wild). The Burrowing Owl is listed as endangered in Manitoba, with fewer than five pairs returning to reproduce in recent years. The Zoo has re-established a breed-and-release program in cooperation with Manitoba Conservation and the University of Winnipeg. The above are examples of maintaining genetically viable captive populations – an important means of contributing to the conservation of at-risk exotic and native wildlife.

Rescue Center

Zoos and aquariums are often called upon to rescue, treat and house animals from the wild that would otherwise perish. While some animals may be rehabilitated and released back to the wild, others must be maintained in captivity for the remainder of their lives. The Zoo's plus-46-year-old rehabilitated pair of Bald Eagles (which raised 23 chicks) is a prime example of wildlife resilience in a species that averages only 15-19 years in the wild. These two remarkable birds were the subject of an article in International Zoo News (Vol. 55/8, December 2008), entitled: "Bald Eagle Longevity and Reproduction." These two birds hold species' records for both longevity and ages of successful breeding. The Zoo's files reveal that 7 Golden and 110 Bald Eagles have been rehabilitated and either maintained here or sent to dozens of other facilities. The public is largely unaware of the role played by zoos and aquariums in saving the lives of injured and orphaned wildlife.

With the demise of Polar Bear populations (especially in Hudson Bay) linked to global warming, the Zoo has decided to concentrate on this native species, in cooperation with Manitoba Conservation, Polar Bears International, and other partners. As part of the Zoo's new Master Plan redevelopment, the current Bear Range is being renovated to hold up to eight orphaned or injured Polar Bears. In 2011, an International Polar Bear Conservation Center will open, which will support research and carry out education programs aimed at conserving this endangered species. The following year will see the creation of extensive outdoor and indoor facilities capable of holding and displaying up to eight adult bears, including breeding pairs. Perhaps there is no other species that symbolizes more the sad plight of majestic wild animals as a result of human-caused factors, and the impending loss of Arctic biodiversity.

Interpretive Programs

An important method of encouraging biodiversity conservation is an informed public, sensitized to supporting conservation legislation, programs and budgets. Exhibit signs, interpreter-led tours, zoo camps, and special shows and events all contribute to helping people understand the causes of wildlife loss and extinction, and that we depend on healthy ecosystems and environments for our very lives and economies. The Zoo's 114 bilingual interpretive signs are available on the websites of CAZA and the Assiniboine Park Conservancy. Like other CAZA members, our Education Department carries out a variety of programs dealing with biodiversity conservation and endangered species, and we often receive requests for presentations on these topics from school and nature groups. Following many decades of limited budgets, the new governing body, the Assiniboine Park Conservancy, has embarked on a 120-million dollar Master Plan that will create an entirely new zoo. The 2010 Baines Award-winning Pavilion of the Lions, the Steller's Sea Eagle Exhibit, and the Sechuan Takin Exhibit demonstrate a new standard exhibits being planned.

Media Information

Developing a close relationship with the media is an economical means of conveying frequent biodiversity-conservation messages to a large audience and especially to those individuals who do not regularly visit zoos or aquariums. Most people have no idea of the escalating loss of species at home and around the world, or how they can

contribute to solving major problems like climate change. The Assiniboine Park Zoo prepares about 10 public-service announcements each year, which generate through interviews up to 250 media hits (sometimes international) on television, radio, print and the internet. The involvement of zookeepers (with personal anecdotes about their animals) and high-profile dignitaries such as the Mayor of Winnipeg, clearly help draw media response. Education Director Scott Gray and Senior Veterinarian Chris Enright participate in weekly radio and television shows which frequently feature species at risk and other biodiversity-related subjects.

Publications

Written materials such as pamphlets, popular and journal articles, and books are another means of conveying information on biodiversity to the public, students and researchers. Over the years I have enjoyed researching and publishing numerous articles on animals, plants, and zoo-related topics, such as the CAZA article entitled "Buzzword Biodiversity," plus a number of books such as "Mammals in North America," "Polar Bear Encounters at Churchill," "Manitoba's Big Cat," and "The Encyclopedia of Manitoba," in which I served as Zoological Editor. In this 846-page Encyclopedia, I and my Manitoba colleagues in various biological disciplines contributed 200 lengthy articles on all major wildlife groups characteristic of terrestrial, freshwater and marine ecosystems of Manitoba, and including all life forms from microscopic protozoans to moose and whales. This was in effect the first accounting of Manitoba biodiversity, including numbers of species (actual and estimated) in certain families and orders – a complex effort that has not been attempted in many other jurisdictions. Surprising to even other provincial biologists, Manitoba is home to the remarkable 7-metre-long Greenland Shark, the up-to-400 kilogram Arctic Lion's Main Jelly, over 15,000 species of insects, 700 spiders, 170 mollusks, 150 fish, 16 amphibians, 8 reptiles, 400 birds, 86 mammals, 2500 plants and 3000 fungi.

Manitoba Endangered Species Advisory Committee

Since its inception in 1991, a number of colleagues and I have served on an Endangered Species Advisory Committee, whose mandate is to review and recommend to the Manitoba Minister of Conservation species that are in need of legislative protection, in accordance with an Endangered Species Act passed in 1990. Thus far, over 50 species have been reviewed, and 12 species are listed as Endangered, 15 are Threatened, 8 are extirpated, and 2 species are extinct. The most-recent listing is for Woodland Caribou, which is now recognized as Threatened (although the Committee recommended the Endangered category). We are in the process of ensuring that our listings correspond to those of COSEWIC (the Convention on the Status of Endangered Wildlife in Canada). Risk-assessment and recovery-plan committees face a monumental and growing task; in reality, thousands of species are at risk across Canada from habitat destruction, invasive-species competiton, diseases, pollution, climate change, and other human-caused factors.

Manitoba Ecological Reserves Advisory Committee

Manitoba's Ecological Reserves Program began in 1973 with the goal of offering the highest-level of protection for wildlife, habitats and landscapes on Crown lands. The Ecological Reserves Advisory Committee's function is to prepare, review and make recommendations to the Minister of Conservation on properties worthy of inclusion into the program. I have been a member of the Committee since 1995 and thus far our work has resulted in the protection of 62,000 hectares within 22 Ecological Reserves. There are a number of proposals for Arctic reserves, such as the Seal River and Nelson River estuaries, however implementation has been complicated due to marine waters falling within the jurisdiction of Fisheries and Oceans Canada. I have tried to perform a coordinating role to help ensure that ecological reserves capture lands and waters inhabited by species designated under the Endangered Species Act. Ecological reserves, provincial and federal parks, and other protected areas are likely the

most-important means of ensuring the survival of regional biodiversity, in light of escalating industrial demands and anticipated geographical adjustments of ecosystems to climate change.

Nature Conservancy of Canada (Manitoba Region)
The Nature Conservancy is Canada's largest conservation organization whose goal is protecting biodiversity by acquiring private lands through purchase and donation, and by signing conservation easements with landowners. Stewardship of these properties is recognized as essential in maintaining diverse wildlife habitats and populations. Since its inception in 1962, NCC has acquired 800,000 hectares of ecologically significant land across Canada, and is raising in the next five years an astounding 500 million dollars for conservation of Canada's wild lands and their biodiversity. I have had the opportunity to serve as a member of the Manitoba Regional Board of Directors for 10 years, and to chair the Scientific Advisory Committee, which reviews and recommends staff proposals for land acquisition, and approves major conservation plans. NCC Manitoba focuses on six conservation areas in southern Manitoba, including the endangered Tall-grass and Mixed-grass prairies, which are home to many of Manitoba's at-risk species of wildlife, especially migratory songbirds. The Manitoba Region has conserved 132 properties totaling 16,393 hectares, and plans to add an average of 40 properties annually. Participating on the NCC Board is so rewarding, knowing that each parcel of land acquired is preserved in perpetuity for tens of thousands of species.

Parks and Protected Areas Research Forum of Manitoba
Founded in 2001, this annual conference brings together people from academia, government, private consultants, and students in the fields of biology, environment, sociology, archaeology and park management. It is a great opportunity to learn about and to share new research being conducted in municipal, provincial and national parks and other protected areas. I have the pleasure of being the Zoo representative on the Planning Committee. The January-2011 Forum's theme is highlighting biodiversity research and management in the North and South, and is being held jointly with the Churchill Northern Studies Center and Wapusk National Park. Arctic biodiversity and the Polar Bear will feature prominently on the agenda. I plan to deliver a presentation comparing the mammal faunas and their ecology in tundra and prairie communities.

Personal Research in Mammalogy and Entomology
While I was employed as a Curator of Mammals and Birds at the Manitoba Museum, I and my colleagues studied small mammals in over 1000 habitats in the province, from tundra and forests to the prairies. We recorded detailed ecological field notes on over 75 species, prepared over 20,000 specimens for the Museum research collection, and published numerous books, journal papers, and popular articles. This was the first inventory of the mammals of Manitoba. These data have also proven useful in government wildlife-management activities (e.g., Manitoba Conservation Data Center), university research, and presentations to the public and universities. For the past 16 years, I have focused my personal research on entomology – which includes groups like beetles, which attain great biomass and have major impacts on the functioning of food webs and ecosystems. The knowledge of arthropod biodiversity is in its infancy in Manitoba and other areas of Canada, and it is important to determine what species are at risk before they are eliminated by habitat loss and climate change. In this regard, I have collected, prepared and donated to the University of Manitoba's J.B. Wallis Museum of Entomology over 10,000 specimens of arthropods, which will be available for study for many centuries. I publish reports on my field activities throughout North America in the Newsletter of the Entomological Society of Manitoba, which is available on-line.

Manitoba Bio-Net
The Bio-Net, or short for Biodiversity Network, is a committee consisting of representatives of a dozen nature

organizations in Manitoba (such as the Zoo, Manitoba Museum, and the Invasive Species Council), and we meet periodically to plan and coordinate educational programs surrounding Biodiversity Day, and this year of course, The International Year of Biodiversity. Each organization carries out and reports on its interpretive activities, such as exhibits, radio interviews, newspaper articles, zoo tours, and articles posted on a website entitled NatureNorth. These programs help ensure that every member of the public has heard of the word biodiversity, and has a basic understanding of what it means.

Biodiversity Inventory of Manitoba

I have begun discussions with the Manitoba Conservation Data Center and the Manitoba Regional Board of the Nature Conservancy of Canada on a proposal to initiate and fund a long-term biodiversity inventory of Manitoba, which would identify as many species of possible within the province, their approximate distribution, and their conservation status. This challenging objective is called an "All-Taxa Biodiversity Inventory." If successful, it would generate in time an inventory of tens of thousands of species from all five Kingdoms of life. I suspect that there are up to half-a-million species in Manitoba, when considering all phyla, including protozoans, algae, fungi, bacteria, and archaea. We know little about this huge diversity of life, how it works within intricate ecosystems, or how to manage it successfully. Finding out what is living in our own backyard is vital to conserving local biodiversity. Hopefully zoos and aquariums across Canada will participate in partnerships to inventory and care for wildlife of their regions.

Conclusion

These activities summarize what the Assiniboine Park Zoo is contributing to biodiversity knowledge and preservation in our home province and internationally. I hope that the new Assiniboine Park Conservancy and Zoo will expand on these programs, since the ecological challenges of human over-population, industrial expansion and climate change are increasingly impacting on the diversity of life in Canada and everywhere on our planet. Sadly we have reached the 'salvage stage' of efforts to slow the rate of species extinction, with periodic loss of well-known mega-fauna, and likely over 100 species of small life forms every day.

Ten years ago I published an article in the CAZA Newsletter and in International Zoo News entitled, "Overpopulation, Poverty and Wildlife Extinction," in which I reiterated the inescapable conclusion that reduction of the human-population was absolutely essential to preserve biodiversity and the environment, and that the overpopulation crisis was the root cause of humanity's mounting series of tragedies. Our CAZA organization and zoos and aquariums worldwide have largely remained silent on this critical issue, and I urge CAZA to seriously examine this issue, incorporate it into policies and messages, and to partner with progressive conservation organizations such as the Center for Biological Diversity.

NEW DIRECTOR OF ANIMAL CARE JOINS THE CALGARY ZOO

Dr. Jake Veasey, an animal welfare scientist and conservation biologist, has joined the Calgary Zoo as the Director of Animal Management, Conservation and Research. For the past 10 years Jake was the Head of Animal Management & Conservation at Woburn Safari Park in England UK, and brings an exceptional track record in zoo animal welfare and international conservation.

Dr. Clément Lanthier, Zoo President and CEO said, "Jake is a great addition to our senior management team as he brings a rare blend of experience and scientific expertise in animal welfare and conservation and in managing successful animal care teams."

Over the past decade, Dr. Veasey has played an extensive role in zoo animal welfare and conservation throughout the UK, Europe and further afield. He was appointed as an advisor to the UK government on zoo animal welfare and is a member of numerous international advisory bodies for the conservation and care of wild animals including the world's foremost international conservation organization, the International Union for Conservation of Nature (IUCN).

During his tenure at Woburn, Jake was instrumental in securing the British & Irish Association of Zoos & Aquariums' (BIAZA) top animal welfare award three times, several awards and commendations for best new enclosures, and awards for fundraising for conservation in the wild.

"This is a key position within our business and we took great care to get it right. Finding the precise skill set we were looking for was not easy and the search quickly became a global one. We are pleased to welcome Jake to Calgary and will be doing our best to make him feel at home in the zoo and in his new home city," added Dr. Lanthier.

Dr. Veasey said, "Moving to Calgary was a big decision for me, but I felt there was an opportunity for me to make a real difference in Calgary and that was too good to pass up. I'm proud of what I achieved in the UK, but the time was right to consider new challenges and opportunities to make a difference; something that has always been a massive personal motivation for me. I'm really looking forward to working alongside a senior management team that have convinced me they are committed to animal welfare and conservation and will support me in driving through significant changes to ensure the Calgary Zoo becomes and remains a world-class zoo."

Dr. Veasey will manage the branch of the zoo that includes animal care, veterinary services and conservation research. In addition, he will be involved with the zoo's national and international conservation efforts.

"We have a long history of commitment to global conservation," said Dr. Lanthier. "Dr. Veasey will continue to manage the European eastern bongo herd; a species of antelope that he helped identify as one of Africa's most critically endangered large mammals when working alongside the Kenya Wildlife Service and Bongo Surveillance Program in the highland forests of Kenya."

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Veasey continued, “I’ve only been in Calgary a few days and am just beginning to find my feet at the zoo, meet my team and get to know the city and its weather! My focus is to ensure the highest possible standards of care are in place and to accelerate the rate of change to help the Calgary Zoo become a centre of excellence. This will take time and investment however I’m looking forward to rolling my sleeves up and making a real difference.”

Background - notes received from professional colleagues

“Making a real difference for captive animals involves the objective, evidence-based assessment and improvement of their welfare: making decisions that are informed by the head -- not just the heart -- ensures they get the best husbandry and care. Jake is a champion of this approach, and Calgary Zoo is truly lucky to have lured him from the UK. I had the pleasure of working with Jake on the welfare of zoo elephants, and have always found him to be passionate about zoo animal welfare and conservation.”
- Professor Georgia Mason, Canada Research Chair in Animal Welfare, University of Guelph, Ontario

“Jake Veasey is a highly accomplished zoo professional and passionate about animal welfare. Jake has designed and implemented some of the most innovative care facilities for many species including rhinos, antelopes and elephants. We worked closely on many projects including the UK Governments Zoos Forum where Jake was one of the welfare experts and therefore I can say with confidence that the Calgary Zoo is very fortunate to have obtained the services of someone with Jake’s credentials.”
- David A. Field, Zoological Director, Zoological Society of London

“I had the pleasure of working with Jake Veasey in the capacity of Bongo conservation breeding coordinator for Europe and his work on the EAZA Rhino group. I have always found him to be passionate about zoo animal welfare and conservation, particularly with regard to African species. The Calgary Zoo is very fortunate to have obtained the services of someone with Jake’s credentials.”
- Dr Lesley Dickie, Executive Director, European Association of Zoos and Aquaria