

# Explaining the Source Population Alliance (SPA)

by Gavin Livingston, SPA Manager

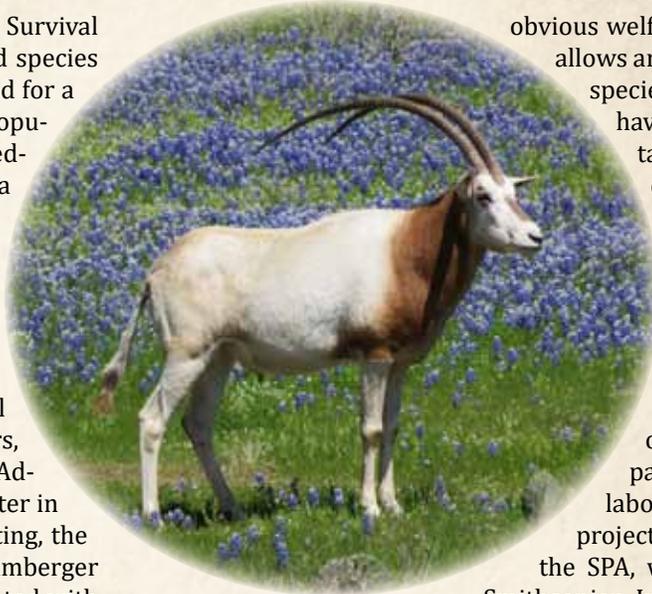
*The Source Population Alliance (SPA) is a group of private landowners, conservation centers, and zoos who dedicate their unique resources to creating sustainable populations of wildlife that serve as dependable reservoirs for the conservation and use of animals in captivity and in the wild.*

In 2010, the Conservation Centers for Species Survival (C2S2), alarmed by the loss of ungulate spaces and species in AZA-accredited zoos, decided that there was a need for a new paradigm to create truly sustainable ungulate populations. Forming a unique alliance between zoos, breeding centers, and private landowners appeared to be a possible way of creating lasting populations as assurance against extinction. The Source Population Alliance (SPA) was created to bring these diverse partners together to share knowledge, resources, and combine their animal populations to create a larger metapopulation that would ensure species survival.

The idea of a SPA was first discussed in small groups within C2S2 along with private landowners, before bringing the concept to the Ungulate Taxon Advisory Group meeting held at Fossil Rim Wildlife Center in 2013. As a result of enthusiasm shown at that meeting, the SPA officially launched in August 2014 at the Selah Bamberger Ranch near Johnson City, TX. The program was initiated with participation of 15 facilities representing private landowners as well as ZAA and AZA facilities with a focus on four species: addax, *Addax nasomaculatus*; addra gazelle, *Nanger dama*; sable antelope, *Hippotragus niger*; and scimitar-horned oryx, *Oryx dammah*. Three of these four species were critically endangered in the wild, and all were prevalent on private ranches.

The SPA formed under governance by an Executive Committee comprised of individuals from nine participating institutions representing the private and public sector. The primary responsibility of this group is advising the SPA Program Manager and identifying and vetting new participants. The highest priority is given to ensuring involvement of only credible individuals and organizations committed to growing and managing a healthy, viable metapopulation of the priority species. In this context, SPA candidates must receive unanimous approval by the Committee for admission to the SPA. Then each new participant must review and sign a Principles of Management and Ethics, indicating commitment to adhering to all applicable requirements/guidelines while maintaining best practices in animal care and conducting business ethically.

The advantages to participation including working together with like-minded people to create wildlife populations of sufficient size to be relevant to conservation. SPA also emphasizes managing ungulates as they are found in nature – in large, socially natural herds on spacious pastures. Besides the



obvious welfare benefit, this allows animals to exhibit species-specific behaviors, all important if descendants are to be candidates for eventual re-introduction projects.

Participating within the SPA also offers opportunities to participate in collaborative research projects. For example, the SPA, with support of

Smithsonian Institution scientists working within C2S2, is pioneering the application of genomics technology to determine the genetic well-being of individual animals and the herd itself. This includes assessing levels of inbreeding and determining parentage. Such information has the potential of improving herd quality and value through presenting options of optimal bull rotations or the acquisition of new stock.

The SPA emphasizes a flexible management structure. Private sector participants manage their animals and herds according to personal preferences. Participants continue to maintain ownership and make all decisions, including where they may ultimately want to transfer their own animals. There also is no interference with zoo association breeding programs, such as ZAA's Animal Management Program (AMP) or AZA's Species Survival Plan (SSP). This arrangement minimizes rules while encouraging collaborations among SPA's group of participants, all for the greater good of preserving species.

One participant requirement is contributing to an annual census of animals owned and managed. This information is critical to understanding the growth of the population. A form is provided by the SPA Program Manager requesting information on animal numbers based on gender, age, effective breeders, and number of offspring produced in the past year. This information also is being used by C2S2 with the Conservation Planning Specialist Group of the International Union for Conservation of Nature to develop computer models to best de-

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*Create and preserve sustainable ungulate populations long-term using a combined public/private sector alliance.*

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sign the metapopulation demographics to achieve sustainability.

Beyond creating these assurance populations, SPA is dedicated to linking its ex situ efforts to the in situ efforts. For example, this program and its participants have provided both direct financial support as well as active participation in the release project of scimitar-horned oryx into the Republic of Chad. Recently, SPA and Sahara Conservation Fund signed a Memorandum of Understanding to apply both organizations strengths to preserving imperiled Saharan antelope species.

Current genomics research includes a comparison of the genetic status of sable antelope in the SPA population to those living in the wild in Africa. Therefore, the SPA offers opportunities to contribute both financially and through in-kind support to field or research activities, and/or add one's animals to this growing and



*Opposite page: Scimitar horned oryx, Oryx dammah. Griffin Point Ranch*

*Above: Sable antelope, Hippotragus niger. Griffin Point Ranch*

*Left: Bongo calf, Tragelaphus eurycerus. Austin Savanna*

*Below: Addra gazelle, Nanger dama. Fossil Rim Wildlife Center*

connected metapopulation.

Today, there are more than 30 participating institutions within the SPA, including the following ZAA facilities Fossil Rim Wildlife Center, Austin Savanna, Hemker Park & Zoo, Lion Country Safari, and Tanganyika Wildlife Park. SPA is growing internationally, with participants in Canada and Australia. Collectively, these institutions are providing more than 50,000 acres of land to ungulate conservation breeding. The results are beginning to pay dividends. In the past 4 years, the numbers of animals within the four SPA target species has grown 140% -- from 475 in 2014 to more than 1,200 in 2018.

This expansion and growing interest in SPA has motivated the Executive Committee to increase the size of the species portfolio. Recent additions include the





*Banteng calves, Bos javanicus. The Wilds*

For more information about the SPA, visit the website at [sourcepopulation.org](http://sourcepopulation.org). Contact Gavin Livingston at 816-813-0696, [glivingston@conservationcenters.org](mailto:glivingston@conservationcenters.org)

Arabian oryx, *Oryx leucoryx*; bongo, *Tragelaphus eurycerus*; roan antelope, *Hippotragus equinus*; Grevy's zebra, *Equus grevyi*; lowland anoa, *Bubalus depressicornis*; and banteng, *Bos javanicus*. The SPA is also exploring increasing number of facilities working with caprids. The known, genetically pure caprid population is believed to be small and, thus, deserves attention. The initial focus is on the Nubian ibex and Transcaspians.

We are excited about the potential of this private-public sector alliance, which already has shown significant progress, largely by identifying so many people and institutions interested in playing a greater role in ungulate conservation. This is particularly important for ungulates where wild populations are under intense pressure, and the managed zoo population is largely unsustainable. SPA offers an innovative way of utilizing the unique resources available in both the zoo and private sectors – especially needed space so critical for establishing herds. In the end, the SPA participants are working to ensure the highest quality herds to increase the maintenance of species integrity and viability, all while contributing to the great good.



*Addax, Addax nasomaculatus. Ten Triple X Ranch*