THE FIRST RESULTS OF RUSSIAN-JAPANESE JOINT PROGRAMME
OF THE SWAN GOOSE CONSERVATION IN RUSSIA

N. D. Poyarkov

Moscow State University, Moscow, Russia; poyarkov@soil.msu.ru

Most of the species requiring protection are known to be relict and stenobiotic ("fragile" and "sensitive" in biological meaning) forms. Successful implementation of the conservation programmes for such so-called "umbrella-species" would also favour the protection of the entire faunistic complexes and many other components of the ecosystems and promote preservation of the regional biodiversity. At the same time, the programme for preservation of the particular species should be carefully adapted to this species. The structure and dynamics of the range, population trends and details of ecology of the species should be well known to allow us to reveal the "bottlenecks" in the species' biology. For the Swan Goose, the latter are first of all connected with the anthropogenic factors. Natural curiosity and credulity, nesting in the densely populated and easily accessible flood plains, and intensive and uncontrolled hunting at winter grounds made the Swan Goose the most vulnerable goose species in the East Asia. The early arrival at the breeding grounds (in the beginning of the season the hunt is most intensive) and brood amalgamation (allowing catching or killing many goslings at the same time) are the additional factors of declining of the Swan Goose numbers in Russia. Local people are poorly informed about the critical state of the species.

Our goal was to develop the complex programme for the Swan Goose conservation and restoration of the population on the national and international scale. The pilot part of the programme was developed for the Russian populations (Poyarkov, 2000; Poyarkov, Kurechi, 2001; Kurechi, Poyarkov, 2002). The following main tasks of this programme were determined:

- To perform the Swan Goose census in the known nesting sites and to study the peculiarities of the species’ biology;
- To carry out GIS-analysis of the areas inhabited by the Swan Geese, reveal and examine potential nesting places;
- To mark geese of different geographical populations with neck collars and satellite transmitters (if possible);
- To create a database on the marked Swan Geese;
- To provide grounds for the necessity of establishment of new especially protected territories in the areas inhabited by the Swan Geese;
- To inform the local people about the necessity of protection of the Swan Geese;
- To achieve banning of the goose spring hunting at the nesting sites and delay of the onset of hunting season in autumn until mid-September (departure of the Swan Geese to their wintering grounds);
To develop the procedures for restoration of the species within its range and to establish the pedigree records of the captive stocks of the geese.

The GSDSG and JAWGP joint project was implemented in 2000–2003 with financial support of the KNCF (Japan). During this period we collected some original data and were able to realise a number of the programme items.

1. All available original and published data on the numbers and biology of the Swan Goose were compiled and published (Poyarkov, 2001).

2. The basic known and prospective nesting sites of the species were surveyed. Some previously unknown breeding sites of the Swan Geese were found (fig. 1).

3. Obvious vacant and poorly occupied sites on Sakhalin (the Lakh and Tyk rivers), on the Okhotsk seacoast (the Usalgin and some other rivers), and in the Priamurie were revealed.

4. Hundreds of questionnaires were spread among local hunters; a few dozens of them have been returned with information on Swan Geese in the Priamurie.
5. The Swan Goose population on Lake Udyl’ has been monitored for the last 4 years. The tendency of increase in goose numbers in the Udyl’ Zakaznik (refuge) and, probably, on the adjacent territories was revealed (fig. 2). It is noteworthy, that the general population growth occurs due to increase in the numbers of goslings, i.e., productivity of the local population increases.

![Graph showing the number of Swan Geese on Lake Udyl']

Fig. 2. The number of Swan Geese on Lake Udyl’.

6. The research program for the species in Transbaikalia was coordinated. In 2001–2003, Dr. O. Goroshko carried out studies on the numbers and ecology of Swan Geese in Daurskiy zapovednik (nature reserve) and in Northern Mongolia. Prof. H. Higuchi, Tokyo University, took part in the 2002 studies on the Torey lakes.

7. Some peculiarities of the species’ ecology were revealed; extraordinary abilities of nesting in the variety of different habitats, geographical mobility of populations and mobility of brood amalgamations are among them. Original data on goose feeding was collected. An assumption that anthropogenic factors are the most crucial for the declining of the population of Swan Goose in the Far East proved to be true.

8. Swan Geese were marked with satellite transmitters in cooperation with Prof. H. Higuchi. In 2001 we marked 2 adult birds on Lake Udyl’. A month after marking, the signals of both transmitters were confined to stationary locations. It means that the birds had either died, or lost transmitters. In 2002, six adults were marked in Daurskiy zapovednik. Only one of them was traced in autumn 2002 up to the coast of the Yellow Sea (39°07’N,
122°24'E). The signals of the other transmitters ceased soon after the devices were mounted on the birds. Dr. O. Goroshko, Daurskiy zapovednik, took part in this project.

9. Swan Geese were also marked with blue collars with white code, series R**. In 2001, two juveniles were marked with collars and one of them was observed by a birdwatcher at the Han River estuary near Seoul (37°45'N, 126°42'E) on 2 December 2001. In 2002, all caught geese were marked with both the collars and PTTs. In 2003, two adult birds and 9 juveniles were marked. Six of them were seen at the Han River estuary in late October and the beginning of November 2003. On 29 April a Swan Goose was poached on Lake Udyl' (52°10'N, 139°52'E). It was one of three geese marked with collars on 3 April 2003 at the Han River estuary (37°45'N, 126°42'E). One more goose of this group was shot at the Ulbanskiy Bay, the Sea of Okhotsk (53°33'N, 137°25'E). It proves that the Korean stopover is important for the Swan Geese of the Far Eastern populations on their migration to the wintering grounds in China and on their way back.

10. Zakaznik “Kholan” was established for protection of the nesting Swan Geese in 2001 due to our activities (Decree of the Head of Administration of the Ul’chskiy district, the Khabarovsk Kray, N 250, 13.08.2001).

11. Large-scale activities aimed at raising public awareness and relevant education of the local people were carried out. Hundreds of stickers, posters, and booklets were printed and distributed. A tape with the call for protection of rare geese (text read by a famous Russian actor A. Dzhiggarhanyan) was recorded and broadcast by “Radio of Khabarovsk”. A number of lectures for schoolchildren were delivered.

12. Four (2001) and five (2003) young Swan Geese confiscated from the local people were brought to the Moscow Zoo. They could form a basic stock for the project of restoration of the Swan Goose populations within their range. The Kamchatka Nursery managed by Dr. N. Gerasimov with its experience in restoration of the population of Aleutian Canada Geese (the joint programme with JAWGP) could be involved in this project.

13. Preliminary agreements upon joint project of restoration of the Swan Geese in Transbaikalia (Irkutsk University), in the Amur area (Muravyovka Nature Park), and Kamchatka (N. Gerasimov’s Goose Nursery) were achieved.

14. The feather samples were collected for the population studies with the use of the methods of molecular genetics. Unfortunately, our proposals on the changes in hunting regulations (delay of the opening of the autumn hunting season and banning of the spring goose hunting in the Ul’chskiy and Nikolaevskiy districts, the Khabarovsk Kray) for prevention of casual shots of Swan Geese were not supported by the Khabarovsk Department of Game Management. GIS analysis was not performed because of the lack of funds. We still hope that these items will be realised in future.
The following research and conservation activities are planned:

- Further monitoring of the Swan Goose populations in Russia and revealing the “bottlenecks” in the species’ ecology.
- Goose marking, including radio- and satellite tracking, is very important for the studies of the species’ biology and elaboration of the international conservation programmes.
- The studies of molecular genetics of the birds from different geographical populations are necessary to reveal the population structure of the species, particularly the rate of panmixing within the species’ range (the rate of gene exchange between the eastern and western populations).
- Financial support of Special Protected Territories (such as Udyl’, Kholan, and Daurskiy zapovednik) is very important for the Swan Goose conservation.
- Establishment of new protected territories for the Swan Goose conservation also needs allocation of special funds.
- Raising of public awareness and development of education programs, particularly those using TV clips, remain one of the key items for Swan Goose conservation.
- Development and implementation of the programme of restoration of the Swan Goose population within the former range (Japan and Korea) would be important to guarantee the survival of the species in the winter period.
- Development of the system of monitoring Russian populations at the wintering grounds in China based on the previous experience (changes in the hunting regulations at the wintering grounds and along the flyways, establishment of the rest zones, refuges and other protected territories, etc.) is also very important for the Swan Goose protection.

Acknowledgments. The following persons took part in the field works: Dr. K. Litvin (Institute of Ecology and Evolution, Moscow) in 2000, A. Kozlov in 2001–2002, Dr. O. Goroshko (Daurskiy zapovednik) in 2001–2003, and M. Ivanov in 2003. The students of the Biological Faculty, Moscow State University, N. Emel’chenko and D. Dorofeev worked on the project in 2001–2002 and 2003, respectively. A. Roslyakov and his friend P. Paduto not only took part in the project in 1999 and 2001, but also repeatedly helped me to solve managerial problems in Khabarovsk. In 2001, the project of the goose marking was implemented in cooperation with Yu. Darman (WWF-Russia Program Office, Vladivostok), V. Andronov (Ministry of Natural Resources, the Khabarovsk Office), and T. Goloveshko (Komsomol’sk zapovednik). Many local people helped me and I am particularly obliged to S. Anokhin, the Game Manager of the Ul’chskiy district, and the family of S., Yu. and D. Koval’chuk, whose help cannot be over-estimated. Dr. V. Kirilyuk and some other employees of Daurskiy zapovednik helped us in 2002. Dr. V. Masterov (Biological Faculty, Moscow State University) many times assisted us in the field. A. Popovkina (Biological Faculty, Mos-
cow State University) and Drs. K. Litvin and E. Syroechkovski, Jr. (Institute of Ecology and Evolution, Moscow) constantly helped me in data processing and solution of managerial problems in Moscow. Famous Russian actor A. Dzhi-garhanyan kindly agreed to read the text for radio broadcast. I express my sincere gratitude to all the named persons and many of them who are not mentioned here. Without their help the implementation of the project would be impossible.

REFERENCES

ПРЕДВАРИТЕЛЬНЫЕ ИТОГИ ПРОЕКТА ПО СОХРАНЕНИЮ СУХОНОСА В РОССИИ

Н. Д. Поярков
Биологический факультет МГУ, г. Москва, Россия

РЕЗЮМЕ
Катастрофическое сокращение численности сухоноса во 2-й половине XX века заставило орнитологов задуматься о создании комплексной программы сохранения вида. Пилотный проект программы по сухоносам, обитающим в России, был разработан РГГ и Японской ассоциацией по охране диких гусей (JAWGP) при финансовой поддержке фонда KNC (Япония) и проводился с 1999 по 2003 гг. Были сформулированы следующие задачи:

• Учет численности сухоноса в известных местах обитания и исследования специфики биологии вида;
• Проведение GIS-анализа районов обитания сухоноса, выявление и исследование потенциальных мест обитания;
• Исследование миграций вида при помощи индивидуального, в том числе, и спутникового мечения;
• Обоснование создания новых охраняемых территорий, населенных сухоносом;
• Распространение информации и пропаганда среди местного населения о необходимости охраны сухоноса;
СУХОНОС (ANSER CYGNOIDES)

- Запрет весенней охоты и перенос осенних охоты на более поздние сроки (после отлета сухоносов на зимовки) в районах их гнездования;
- Разработана программа по восстановлению популяций сухоносов в местах их прежнего обитания.

За время проекта был реализован ряд исследовательских и организационных программ, получены оригинальные материалы.
- Обобщены и опубликованы все основные имеющиеся в литературе данные по численности и биологии вида (Поярков, 2001).
- Обследованы основные известные и предполагаемые места гнездования вида (рис. 1). Установлено гнездование в ряде ранее не обследованных районов: нескольких реках, впадающих в залив Николая, р. Варнак (c-э Сахалин). Выявлены очевидные пустующие и мало населенные угодья на Сахалине (реки Лах, Ык), побережье Охотского мо-ря (р. Усальгин), в бассейне Амура. Распространены сотни анкет среди охотников и местных жителей.
- Проводился мониторинг популяции сухоносов на озере Удьль, прослежена ее динамика за последние 4 года. Выявлена тенденция роста численности в заказнике (рис. 2) и, возможно, на прилегающих территориях. Общий рост численности происходит из-за увеличения продуктивности местной популяции.
- Согласованна программа по исследованию вида в Даурине, где в 2001–2003 гг. О. А. Горюшко проводил исследования численности и экологии сухоносов в Даурском заповеднике и в Северной Монголии.
- Выявлен ряд специфических черт экологии вида, в том числе необычайная эвритопность в период гнездования, мобильность популяций (географическая) и выводковых объединений. Собран большой материал по питанию. Выяснено, что основным фактором, сдерживающим рост численности, следует считать антропогенное воздействие.
- Совместно с орнитологами Токийского университета под руководством Х. Хитучи, а также с В. А. Андроновым и А. Г. Росляковым (ИВЭП, г. Хабаровск) проведено мечение гусей спутниковыми передатчиками и цветными ошейниками (синий фон, белые буквы R**). В 2001 г. на оз. Удьль передатчиками были снабжены две взрослые птицы. Оба передатчика через месяц подавали сигналы из одной точки – птицы погибли или потеряли передатчики. Две молодые птицы были помещены цветными ошейниками, одна из них встречена в эстуарии р. Хан (Han River) 37°45’ с.ш., 126°42’ в.д., около Сеула 2 декабря 2001 г.
- В 2002 г. совместно с О. А. Горюшко спутниковыми передатчиками были помещены 6 взрослых птиц на Торейских озерах, одна из них прослежена осенью до побережья Желтого моря (39°07’ с.ш.,
В 2003 г. помещены цветными ошейниками 2 взрослые и 9 молодых птиц. Из трех гусей, помещенных ошейниками 3 апреля 2003 г. в Корее (эстуарий р. Хан, 37°45' с.ш., 126°42' в.д.), два были убиты браконьерами – один в р-не оз. Удыль (52°10.207' с.ш., 139°52.259' в.д.), а другой – на Ульбанском заливе (53°33' с.ш., N 137° 25' в.д.) 3 августа 2003 г. Таким образом, можно говорить о том, что дальневосточные популяции сухоносов имеют достаточно длительную остановку в Южной Корее.

В 2001 г. по нашей инициативе организован местный заказник «Холан» (постановление Главы администрации Ульчского р-на Хабаровского края № 250 от 13.08.2001). Проведена большая работа по просвещению местного населения. На печатаны и распространены сотни наклеек, плакатов, буклетов об охране сухоноса. По радио г. Хабаровска передавался специальный текст о недопустимости охоты на сухоносов.

Достигнуты предварительные договоренности о совместных работах по реинтродукции сухоносов в Забайкалье, в Амурской области и на Камчатке.

Собраны образцы перьев для исследования популяционной структуры вида молекулярно-генетическими методами.

Наш предложении о переносе открытия осенней охоты на более поздние сроки и запрет весенней охоты на гусей в Ульчском и Николаевском р-нах Хабаровского края для предотвращения случайных отстрелов сухоносов не нашли поддержки. Мы по-прежнему считаем такие изменения целесообразными.

Намечены дальнейшие действия по исследованию и охране сухоносов, в частности, мониторинг известных популяций, исследования «узких» мест экологии, молекулярно-генетический анализ птиц из разных географических популяций, поддержка заказников Удыль и Холан, создание новых ООПТ, продолжение образовательных программ, в частности, в контакте с ТВ.

БЛАГОДАРНОСТИ

В. А. Андроновым (Министерство природных ресурсов, г. Хабаровск) и Т. Головешко (Комсомольский заповедник). Среди многочисленных помощников считаю необходимым упомянуть охотоведа Ульчского р-на С. В. Анохина, семьи С. А., Ю. А. и Д. А. Ковальчуков, помощь которых переоценить невозможно. В. Е. Кирилюк и ряд других сотрудников Даурского заповедника помогали нам в 2002 г. В. Б. Мастеров (биофак МГУ) также неоднократно оказывал нам поддержку при полевых работах. А. Б. Поповкина (биофак МГУ) и К. Е. Литвин помогали мне при обработке материалов и решении организационных вопросов в Москве. А. Б. Джигарханян любезно согласился озвучить текст для радио. Всем названным, а также многим неназванным лицам я выражаю искреннюю благодарность, прекрасно осознавая, что без их помощи осуществление проекта было бы невозможно.