CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

_____

Twenty-first meeting of the Plants Committee
Veracruz (Mexico), 2-8 May 2014

Interpretation and implementation of the Convention

Species trade and conservation

GALANTHUS WORONOWII IN TRADE FROM THE WILD AND THE DEVELOPMENT OF ARTIFICIAL PROPAGATION IN GEORGIA

1. This document has been prepared by the CITES Management and Scientific Authorities of Georgia[*].

Background information

Georgia has been exporting *Galanthus woronowii* since 1997. Exports of *Galanthus woronowii* started at 10 million per year and then rose to 18 million in 2004. Exports declined to 15 million in 2007 due to a reduced quota, and have remained at that level since that time. The European Union is the major importer. The Netherlands dominate this trade. Virtually all of Georgia's bulb exports are re-exported through Turkey.

The CITES Plant Committee expressed concern at the high level of exports of bulbs, in particular Galanthus, from Georgia and noted that it was possibly unsustainable. At that time there was little information available, on the conservation status of the species in trade, levels of artificial propagation, how CITES non-detriment findings are made and the scientific data behind the annual setting of export quotas. *Galanthus woronowii* was therefore included in the Review of Significant Trade in specimens of Appendix II species at the 14th Meeting of the CITES Plants Committee, Windhoek (Namibia), 16 -20 February 2004.

At the 16th Meeting of the CITES Plants Committee, Lima (Peru), 3-8 July 2006 the Committee confirmed the issue to be of possible concern.

CITES Project No. S302 - Improving Implementation of CITES for *Galanthus woronowii* and *Cyclamen coum* from Georgia - was established to address these concerns. This was a CITES project, funded by the Netherlands, bringing together the CITES Authorities in Georgia and outside experts from the Royal Botanic Gardens, Kew (RBG Kew), UK and a researcher from Microsoft Research in Cambridge, UK (MRSC).

The main goal of this project (CITES Project S302), carried out from September 2008 to December 2009, was to review current trade, conservation status and distribution of *Galanthus krasnovii*, *Galanthus woronowii* and *Cyclamen coum* in Georgia, survey *Galanthus woronowii* cultivation/artificial propagation sites and the potential elaboration of a registration scheme for these sites. Field research, literature and workshop reviews were carried out by experts from the CITES Authorities of Georgia, the Royal Botanic Gardens, Kew, UK and Microsoft Research, Cambridge, UK.

[*] *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

Based on this research an annual harvest and export quota of 15 million bulbs from the wild was considered to be precautionary and not detrimental to the populations of *Galanthus woronowii*. The results of the final report were approved by the CITES Standing Committee in March 2010.

Progress since 2010 - Registration of Cultivation Fields that produce Artificially Propagated Bulbs

As mentioned above, in addition to the wild sites, cultivated plots of *Galanthus woronowii* were assessed during the project. By the end of the project, in 2009, it was concluded that none of the sites could be considered as artificially propagated under the definition of this term by CITES, However, the report concluded that sites surveyed showed clear evidence of active management and with certain improvements in management systems artificially propagated stock conforming to Resolution Conf. 11.11 (Rev. CoP15) could be available in the future.

Legal and Administrative Framework

In the report of CITES Project S302, recommendations were made for the sustainable harvest from the cultivated plots and structure proposed for a trial registration scheme. This was implemented in 2012 by the government of Georgia through the legal instrument: *Resolution of the Government of Georgia #18, February 6, 2007 "On Approval of the Regulation on the Rule and Conditions of Issuance of Permit to Export, Import, Re-export and Introduction from the Sea of the Specimens (their parts and derivates) of the Species Included in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*".

According to the legislative changes made in 2012, procedures for registration of the cultivated plots of *Galanthus woronowii* bulbs and *Cyclamen coum* tubers were adopted by the Government of Georgia. The recommendations from CITES Project No. S302 were adopted as part of the formal process of establishing the registration criteria and their implementation through a legal instrument.

Application of the CITES definition of Artificial Propagation at a local level in a range State

Under the new legislation any individual who owns a cultivation plot, where *Galanthus woronowii* bulbs have propagated for more than 5 years, is eligible to apply for CITES export permit for artificially propagated bulbs which then may be granted subject to certain conditions being fulfilled.

These conditions are based on the CITES definition of artificially propagation and how it applies to the life cycle of bulbs and tubers in cultivation in a range State. It takes into account local conditions and agricultural activities that sustain local livelihoods in isolated poor communities.

CITES requires that the cultivated parental stock (which can be sourced from the wild) used to establish artificial propagation must be grown in "controlled conditions". To assess this at local level in Georgia data is collected on; plot size, location, ownership, distance from wild populations, field boundaries and general management, such as addition of fertilizer and local cultivation methods. CITES requires that this "cultivated parental stock"… "must also be maintained in sufficient quantities for propagation so as to minimize or eliminate the need for augmentation from the wild". To assess this at local level emphasis is given to the original source of the bulbs and the length of time in cultivation to ensure that reproduction of bulbs by vegetative means is possible and likely.

To simplify this data gathering process so that it can be applied at a local level, data are collected under a series of simple headings and clear instructions are laid down for the local authorities carrying out site inspections (LEPL – the National Environmental Agency).

Data required from Applicants & Review Process

Applicants who wish to obtain permits for the export of artificially propagated bulbs/tubers from their plots must supply the following data on which the assessment on whether the bulbs meet the CITES definition of artificial propagation is based:

1. Written statement which contains following information:

    a) Amount of *Galanthus woronowii* bulbs or/and *Cyclamen coum* tubers to be harvested annually;

    b) Current estimated amount of *Galanthus woronowii* bulbs or/and *Cyclamen coum* tubers on the plot;

c) Outline of plot management activities;

d) Information about the date of first planting of *Galanthus woronowii* bulbs or/and *Cyclamen coum* tubers on the designated plot;

e) Information on the source first used for propagation of *Galanthus woronowii* or/and *Cyclamen coum*;

f) Information about the date and source of the last planting of *Galanthus woronowii* or/and *Cyclamen coum* tubers.

2. Extract from the Public Registry to give exact location/ownership of the plot.

3. Positive opinion of the LEPL National Environmental Agency. This opinion, based on plot inspection by experts, includes an assessment of the total stock of *Galanthus woronowii* bulbs in the plot.

In order to assess the stock of *Galanthus woronowii* commercial size bulbs, *Galanthus woronowii* stems per 0.25m² quadrat are sampled. Stems are sampled in 20 randomly located quadrats per site. In each quadrat stems of *Galanthus woronowii* are counted (in case of withered stems – two leaves should are counted as one leave); after sampling 20 quadrats the average is then established, which is then extrapolated to give a figure for the total area occupied by *Galanthus woronowii*. Thus the density of *Galanthus woronowii* stems is calculated. Based on the project research, one bulb has two stems, and in the sampling quadrat half of the overall number of bulbs, counted according to this method, are commercial size bulbs. On this basis, stock of commercial size bulbs in cultivation plots are calculated.

The opinion of the LEPL National Environmental Agency includes the results of the assessment of the stock of commercial size bulbs, length of time in propagation, maximum quantity of the bulbs/tubers, which could be harvested from the plot annually. This opinion is time limited- for example for one year.

At the time of issuance of the opinion, the total stock of the plot must be sufficient to allow harvest of the commercial sized bulbs for export while maintaining sufficent parental stock to maintain a viable cultivation field without replenishment from the wild. A positive opinion can be issued for a term not exceeding three years. The fee for the issuance of opinions is defined according to the resolution of the Government of Georgia.

This data is then reviewed by the CITES Management Authority and Scientific Authority of Georgia to assess whether it fulfils the CITES dentition of artificial propagation. If the review is positive an export permit is issued.

Monitoring

After receipt of the permit and harvesting of *Galanthus woronowii* bulbs or/and *Cyclamen coum* tubers, the permit holder is required to present a note of confirmation from the LEPL National Environmental Agency, confirming that harvesting took place from approved plot.

Registration to Date

Since this legislative and administrative process has been established 25 plots have been registered. 24 of the 25 plots are located in the western part of Georgia and one - in the eastern part. Plots located in the western part of the country, particularly in the Ajara Autonomous Republic are the property of local smallholders supplementing their income from farming. Bulbs propagated on these smallholder plots are bought and then exported by the local company “REZO LTD”. One plot in the eastern part of Georgia is owned by the company “HERBES LTD”. Data on these smallholdings, including stocks held in these plots and the stocks approved for export is included in the attached Excel Sheet.

The attached Excel Sheet includes the number of bulbs in each plot in the beginning of 2013, it also includes data on the number of commercial size bulbs at that time (source: survey by the National Environmental Agency). Further columns the amounts planned to be harvested in 2013 and actual harvests on each plot. Also it shows the amount of bulbs left on each plot. The source of this data is the harvest reports from the registered site holders. According to this information the 2013 bulbs harvested and exported did not exceed amounts recommended by scientists. The number of remaining bulbs will be checked during the 2014 Spring survey of registered plots.

Survey Process

Before registration, the plots were surveyed by three qualified botanists (Zurab Manvelidze, Nino Memiadze and Malvina Davlianidze), in total 70,517 square meters were surveyed in 5 villages. All that sites are subject to management plans. During inspections photographs confirming first planting were also provided. Companies presented all the required information including outline of plot management activities, photographs of the plot and videos of planting, etc. The plot inspection data and the data supplied by the applicants was then reviewed by the Scientific Authority and Management Authority and it was their assessment that bulbs grown and harvested to these standards met the CITES definition of Artificial Propagation.

Stock Assessment

Assessment of plots established a *Galanthus woronowii* stock of 24,545,000 bulbs. Among them 19,016,000 bulbs are commercial size bulbs with the diameter of 4cm or more. The total recommended amount to be exported every year, in a three year period, was 6,409,000 bulbs. This is amount which can be harvested from the plots while securing a viable parental stock to ensure future development of *Galanthus woronowii* on the designated plots.

Permits Granted

In 2012, based on the implementing national legislation, two permits were issued to export 6,250,000 bulbs artificially propagated sourced from the registered plots.

a) "Rezo LTD" 5,500,000 bulbs to be exported to Turkey

b) "Herbes LTD" 750,000 bulbs to be exported to the Netherlands.

However, only Herbes LTD used the permit and exported bulbs.The EU CITES Scientific Review Group

Representatives of the CITES Mana gement and Scientific Authorities of Georgia attended the 64th meeting of the Meeting of the European Union CITES Scientific Review Group in Brussels in May 2013. They gave a presentation on procedures to assess, register, manage and monitor sites which produce artificially propagated bulbs and answered a range of questions on these issues from member States and the EU Commission. Georgia received several recommendations after SRG64, among them were finalization and implementation of the monitoring and reporting system and to limit exports of cultivated bulbs to plots which clearly meet the CITES criteria set for artificial propagation.

As recommended by the SRG, permits issued by the Management Authority in 2013 for export of AP bulbs were restricted to bulbs propagated on the registered plots – this is the clear policy of the CITES Authorities. In 2013 only one permit was issued to export 5,500,000 bulbs (exporter "Rezo LTD"). The actual harvest was 5,644,000 bulbs and excess was replanted. Another company ("Herbes LTD") didn't apply for a permit and no harvest took place. (Please see attached Excel Sheet for more information).

Following the SRG meeting in May 2013 and in response to questions raised by the CITES Secretariat the CITES Authorities of Georgia reviewed possible mechanisms relating to monitoring and reporting and to provide an open and transparent assessment of artificial propagation in the cultivation fields. The CITES Authorities decided that this would best be achieved by a initiation of a new dedicated externally funded project including external international partners. Such an approach would also provide for synergy at national level between implementation of CITES and the CBD, responsibility for which lies within the same government department and staff.

The CBD National Biodiversity Strategy and Action Plan (NBSAP)

In May 2011, the Biodiversity Protection Service under the Ministry of Environment Protection initiated the process of revising Georgia's NBSAP. This comprehensive process is assisted by the GIZ project "Sustainable Management of Biodiversity". The final draft of NBSAP (2014-2020), among other CITES related activities, includes assessments related to species in significant international trade. It is expected that this revised NBSAP will be adopted in March, 2014.

CITES Project Established under NBMS and NBSAP

At the request of the Georgian CITES Management Authority, under the implementation of National Biodiversity Monitoring System (NBMS), the German International Cooperation Agency (GIZ) has approved finance for a new project, which initiated in January 2014.

The key objective of the proposed study is to establish the sustainable export quota for wild sourced *Galanthus woronowii* for at least three years (2014-2016), assess the artificial propagation *Galanthus woronowii* in cultivation fields and review and enhance the monitoring scheme for both wild populations, cultivation fields and registered artificial propagation sites.

This work is required to fully fulfil, in a transparent and externally audited process, the commitments made to the European Commission, the CITES Scientific Review Group of The European Union and the CITES Plants Committee and to explore further access to international trade for small stakeholders and supporting and enhancing local livelihoods.

The implementation of the proposed research will cover the following activities:

- All wild populations assessed in 2009 will be re-visited to collect quantitative data on the standing stock in each population. For selected populations, area of occupancy will be recorded using GPS tracking function

- The possible new sites for *Galanthus woronowii* populations in Keda and Khelvacahauri districts of Ajara will be visited to assess populations which were not known during previous surveys

- Methodology for quota establishment will be reviewed and revised

- Sustainable export quota for wild material 2014-2016 will be established based on the current field data updated as obtained from the additional fieldwork

- AP sites will be visited to assess the cultivation of *Galanthus woronowii* and collect quantitative data on standing stock

- Monitoring scheme will be reviewed and further developed to monitor wild populations and AP sites.

- A preliminary review of the applicability of the FairWild Standard to the wild bulb harvest in Georgia will be carried out

- A preliminary review on the on the contribution of this trade to livelihoods and the potential for carrying out a dedicated research project in this area will be carried out

- A review of marking options for artificially propagated bulbs will be carried out

- A workshop will be held in Tbilisi in October 2014 to discuss the results of 2014 surveys and allow face-to-face scientific interaction between the community, traders and other stakeholders.

The proposed activities will be carried out by experts from the CITES Authorities of Georgia, Institute of Botany, Ilia State University, National Botanical garden of Georgia, Batumi Botanical Garden and the Royal Botanic Gardens Kew, UK.

A report on progress will be made to the next meetings of EU SRG and Plants Committee. Furthermore we would highly appreciate if additional qualified experts would be available to visit these plots and express their opinion about this process and give feed back to allow continuing improvement.

Summary

1. This report outlines the current situation with artificial propagation of *Galanthus waronowii* in Georgia

2. Georgia has implemented a process to allow application of the CITES definition of Artificial Propagation outlined in Resolution Conf. 11.11 (Rev. CoP15) to conditions in cultivation fields managed by local stakeholders in the countryside in Georgia

3. The aim of this process is to ensure that the bulbs are “CITES compliant” and that added income is available to support and improve local livelihoods

4. To review the process and to review “CITES compliance” artificial propagation field surveys will be carried out as part of a new GIZ funded international project. Based on the results of these surveys quotas will be set for harvest and export of wild and artificially propagated bulbs for the 2014 season

5. In addition expert workshops will be held in Autumn 2014 including sessions with local stakeholders and traders

6. The initial results of the surveys should be available in May 2014.

Area (sq.m)	Total amount of bulbs in January 2013	Commercial size bulbs in January 2013	Amount of bulbs planned to be exported in 2013	Density (%)	Date of first planting	Management Plan	Photos attached (inspections/first planting)	Boundary between the cultivation field and other land	Trader	Region	Coordinates: X	Coordinates:Y	Village	Number of comercial size bulbs actually harvested in 2013	Approximate current stock (February 2014)
5001	1600000	1300000	450000	70-90	1994	Yes	Yes	Fence	LTD Rezo	Adjara	748059,547 748090,822 748083,917 748102,572 748051,102 748055,942	4605987,172 4605983,275 4605996,382 4605857,682 4605875,532 4605970,022	medzibna	450,000	1,150,000
3999	1800000	1400000	470000	90	1994	Yes	Yes	Fence			747979,812 747895,647 747924,007 74047952,892 747977,707	4605875,792 4605842,372 4605820,587 4605799,692 4605821,742	medzibna	470,000	1,330,000
1501	430000	345000	115000	70-90	1994	Yes	Yes	Fence			748174,552 748101,547 748094,407 748141,007	4605834,732 4605806,527 4608528,382 4605847,102	medzibna	115,000	315,000
1500	570000	460000	155000	50-70	1994	Yes	Yes	Fence			747893,362 747972,987 747979,812 740895,647	4605858,937 4605892,157 4605875,792 4605842,372	medzibna	190,000	380,000
1501	700000	500000	165000	90	1996	Yes	Yes	Fence			744213,827 744265,927 744278,557 744216,652	4608640,532 4608647,687 4608620,497 4608619,367	arsenauli	165,000	535,000

Area (sq.m)	Total amount of bulbs in January 2013	Commercial size bulbs in January 2013	Amount of bulbs planned to be exported in 2013	Density (%)	Date of first planting	Management Plan	Photos attached (inspections/first planting)	Boundary between the cultivation field and other land	Trader	Region	Coordinates: X	Coordinates:Y	Village	Number of comercial size bulbs actually harvested in 2013	Approximate current stock (February 2014)
2501	300000	280000	94000	70-90	1996	Yes	Yes	Fence			744036,262 744033,117 744069,917 744056,962	4608541,102 4608617,872 4608556,862 4608559,582	arsenauli	94,000	206,000
1501	750000	670000	223000	90	1996	Yes	Yes	Fence			743838,692 743840,067 743890,792 743891,102	4608518,402 4608546,077 4608548,487 4608544,367	arsenauli	223,000	527,000
999	500000	440000	147000	90	1996	Yes	Yes	Fence			744408,527 744470,147 744414,987 744410,197	4608446,932 4608452,047 4608430,527 4608440,097	arsenauli	147,000	353,000
2501	1000000	900000	300000	90	1996	Yes	Yes	Fence			744314,027 744391,062 744399,812 744360,757	4608509,272 4608516,992 4608481,827 4608474,792	arsenauli	300,000	700,000
2501	1200000	1000000	330000	90	1996	Yes	Yes	Fence			744340,757 744399,812 744374,097 744365,857	4608474,792 4608481,827 4608426,627 4608422,552	arsenauli	330,000	870,000
4000	2000000	1900000	650000	70-90	1996	Yes	Yes	Fence			744337,532 744271,827 744253,512 744312,602	4608590,577 4608542,212 4608614,212 4608629,092	arsenauli	650,000	1,350,000

Area (sq.m)	Total amount of bulbs in January 2013	Commercial size bulbs in January 2013	Amount of bulbs planned to be exported in 2013	Density (%)	Date of first planting	Management Plan	Photos attached (inspections/first planting)	Boundary between the cultivation field and other land	Trader	Region	Coordinates: X	Coordinates:Y	Village	Number of comercial size bulbs actually harvested in 2013	Approximate current stock (February 2014)
2501	1000000	800000	270000	90	1996	Yes	Yes	Fence			744061,987 744079,917 744162,182 744143,247	4608635,037 4608620,817 4608576,337 4608564,817	arsenauli	270,000	730,000
999	220000	180000	60000	90	1994	Yes	Yes	Fence			740713,847 740708,072 740680,087 740688,462	4607474,422 4607373,342 4607367,637 4607399,097	kolotauri	60,000	160,000
5001	2300000	1900000	650000	90	1994	Yes	Yes	Fence			740825,857 740840,327 740834,842 740748,812	4607376,607 4607369,672 4607361,482 4607308,197	kolotauri	650,000	1,650,000
1199	835000	670000	225000	90	1994	Yes	Yes	Fence			740759,972 740686,142 740697,527 740698,992	4607412,772 4607406,547 4607416,557 4607425,012	kolotauri	225,000	610,000
5001	1900000	1500000	500000	90	1994	Yes	Yes	Fence			740566,107 740584,187 740592,372 740671,977	4607442,822 4607435,852 4607432,697 4607398,232	kolotauri	500,000	1,400,000
2501	410000	340000	115000	70-90	1998	Yes	Yes	Fence			751377,207 751393,197 751414,017 751379,622	4614004,897 4614008,187 4614028,532 4613969,952	kantauri	115,000	295,000

Area (sq.m)	Total amount of bulbs in January 2013	Commercial size bulbs in January 2013	Amount of bulbs planned to be exported in 2013	Density (%)	Date of first planting	Management Plan	Photos attached (inspections/first planting)	Boundary between the cultivation field and other land	Trader	Region	Coordinates: X	Coordinates:Y	Village	Number of comercial size bulbs actually harvested in 2013	Approximate current stock (February 2014)
2500	460000	356000	120000	70-90	1998	Yes	Yes	Fence			751578,771 751391,497 751390,147 751315,687	4613853,177 4613939,732 4613919,352 4613917,522	kantauri	120,000	340,000
3101	380000	300000	100000	50-70	1998	Yes	Yes	Fence			751207,177 751257,387 751189,942 751191,122	4614112,652 4614076,717 4614072,477 4614076,712	kantauri	100,000	280,000
2500	250000	200000	70000	70-90	1998	Yes	Yes	Fence			751122,142 751125,512 751176,642 751155,492	4613879,042 4613881,882 4613854,742 4613852,072	kantauri	70,000	180,000
1200	70000	55000	20000	50-70	1998	Yes	Yes	Fence			751343,667 751375,207 751663,567 751327,267	4614032,947 4614004,897 4613981,537 4614005,132	kantauri	20,000	50,000
3501	410000	360000	120000	50-70	1998	Yes	Yes	Fence			751564,052 751283,937 751240,867 751590,202	4613922,347 4614028,997 4614025,302 4613971,386	kantauri	120,000	290,000
2500	470000	370000	130000	70-90	1998	Yes	Yes	Fence			751124,027 751164,397 751146,142 751128,192	4614159,132 4614129,737 4614080,242 4614089,182	kantauri	130,000	340,000

Approximate current stock (February 2014)	360,000	1650000	16,051,000
Number of comercial size bulbs actually harvested in 2013	130,000	was not harvested	5,644,000
Village	kantauri	tserovani	
Coordinates:Y	4602775,242 4602770,452 4602721,212 4602740,417	4639429,3084 4639467,7458 4639468,3798 4639399,4639 4639396,9462	
Coordinates: X	732067,117 732137,882 732106,982 732069,832	472533,2848 472536,9142 472681,7588 472674,4765 472669,5902	
Region		Mtskheta	
Trader		LTD Herbes	
Boundary between the cultivation field and other land	Fence	Fence	
Photos attached (inspections/first planting)	Yes	Yes	
Management Plan	Yes	Yes	
Date of first planting	1998	2000	
Density (%)	70-90	65-85	
Amount of bulbs planned to be exported in 2013	130000	800000	6409000
Commercial size bulbs in January 2013	390000	1650000	18266000
Total amount of bulbs in January 2013	490000	3750000	23795000
Area (sq.m)	2501	8007	70517