

Research and conservation of Imperial Eagle (*Aquila heliaca*) in Azerbaijan.

Project Report



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Content

- 1. Brief background and summary of project**
- 2. Objectives**
- 3. Activities and results**
- 4. Conclusion and recommendations**

1. Brief background and summary of project

The Imperial Eagle is a Globally Threatened Species and it's mentioned as Vulnerable in Global IUCN Red List (Vulnerable, BirdLife International, 2004). The Southern Caucasus Action Plan for the Imperial Eagle (Horvath et al., 2006) indicates that a basic assessment of the breeding population of the species is a priority. Recently published moderate population estimation for the country was 20-25 breeding pairs (Sultanov et al., 2006). In April 2007 we started a comprehensive survey of Imperial Eagles in the North-Western part of the country. During the 9 field working days we covered the 6000sq km study area (equal to 7% of Azerbaijan territory) where was found 25 breeding pairs of Imperial eagles and a further 5 active territories. It was estimated that for the studied area the number of breeding pairs is 35-60. During the surveys only 25% of habitat suitable for Imperial Eagles was studied. Results indicate that the Azerbaijan population of the species may be among the top three in the world and therefore needs to be researched. But as is mentioned above, this data is only for 25% of the whole potential area, so this project is relevant and important for the study and conservation of Imperial Eagles for the World.

Data collected at the end of the project will be the first and very detailed data about the Imperial Eagle for whole country. Absence of this data prevents the activities for much effective conservation of "project species". Project will let us to have the information about current status of these bird and distribution model will be our guide for future activities and planning for the conservation of "project species" and as well as the IBAs. The project report will be presented to the governmental conservation bodies as a booklet and the data base will be send to all necessary organisations for use in their nature conservation activities. Regular work with media will help us to have the attention of relevant bodies on species and it will directly have its impact on effective conservation of the birds and their habitats. The stakeholders involved to the projects at project areas will become a part network which the Azerbaijan Ornithological Society is working on. And finally the project will give us the opportunity to implement the Species Action Plan for imperial Eagle which was developed for Caucasus and which needs a funding for implementation in Azerbaijan.

Azerbaijan has its own importance for the raptors as it plays a host role for migrating and breeding raptors including the Globally Threatened - Imperial Eagle and many other Birds of Prey. Project gave possibility to continue study the number and distribution of Imperial eagle in North regions of Azerbaijan and improve the conservation of this bird in Azerbaijan with involvement of media, local stakeholders and governmental support. In result 19 nests of IR were monitored in 2009 and 2010. From them 6 were found newly in 2009 and 2010. First the nesting of IE in North-East region of Azerbaijan was registered. Average number of chicks in nest before leaving them by birds were 1,8 (n=15). IE prefer nesting on height 15-25 m on the highest trees around (15-40 m, mainly poplar) or on electric pylons. Food lefts were

presented mostly by grass lizard, hedgehog, corvidae birds, small mammals, chickens and turkeys.

2. Objectives

Management

- Purchasing necessary equipment
- Organize meeting with volunteers and Azerbaijan Ornithological Society's staff to present project
- Contact International Imperial Eagle groups advice and help
- Organize meetings with governmental conservation bodies in order to present the project activities and gain support

Project implementation (Research and public awareness)

- Research and study of the potential habitats in Azerbaijan for the Imperial Eagle
- Surveys of breeding success
- Identify threats through observation and interviews with locals
- Regular monitoring of nests and the habitats of Imperial Eagle
- Regular monitoring of wintering
- Update the previous data base created during the first surveys of the project species
- Organize public meetings and seminars at important sites identified for Imperial Eagle
- Press releases

Post project activities

- Prepare and send the financial and activity report

3. Activities and results

Management:

Purchasing necessary equipment

Necessary equipment: 10 binoculars for distribution between local people were purchased (Pic.1).

Organize meeting with volunteers and Azerbaijan Ornithological Society's staff to present project

Agree to project timetable meeting with participation of volunteers and project staff of AOS were organised in office of Azerbaijan Ornithological Society in May of 2009. Project presentation was made on this meeting and main details of project and expeditions schedule were discussed (Pic.1).

Pic.1. Meeting of volunteers and staff.



Contact International Imperial Eagle group advice and help

International Imperial group was informed about beginning of this project and information about main results of spring-summer expeditions were send to its representative in Hungary Marton Horvath who had helped for beginning researches of Imperial Eagle in Azerbaijan.

Organize meetings with governmental conservation bodies in order to present the project activities and gain support

Meetings with representatives of Turianchay and Ismailly State Nature reserves were organised during field work in 2009 and 2010 years.

Project implementation (Research and public awareness)

Research and study of the potential habitats in Azerbaijan for the Imperial Eagle

Research of potential habitats was made on the territory of Azerbaijan to north from Kura River. During previous researches there were known the habitats and nests of Imperial Eagle in Central and West regions (Goychay, Aghdash, Yevlakh, Gabala, Sheki, Gakh districts of Azerbaijan) so additional researches were organised in Gobustan area (Gobustan, Garadagh districts) and in Ismailly district in 2009 and

Khachmas, Guba and Gusar districts in 2010. 1 new nest of Imperial eagle (see photo) were found in the foothill forest on elevation 631 m, coordinates of nests were taken but this information was included in Data Base of AOS concern Imperial Eagle. Agree to information of local people additional 3-4 pairs of this bird have nesting in the same forest. Later after consultations with expert of Imperial Eagle Working Group Marton Horvath and exchange of photos of feathers collected under the nest this nest was identified as nest of Short-Toyed Eagle (*Circaetus gallicus*) so it was excluded from data base for Imperial Eagle in Azerbaijan.



Pic. 2. Different types of vehicles were used.



Pic.3. Search for nests with telescope.

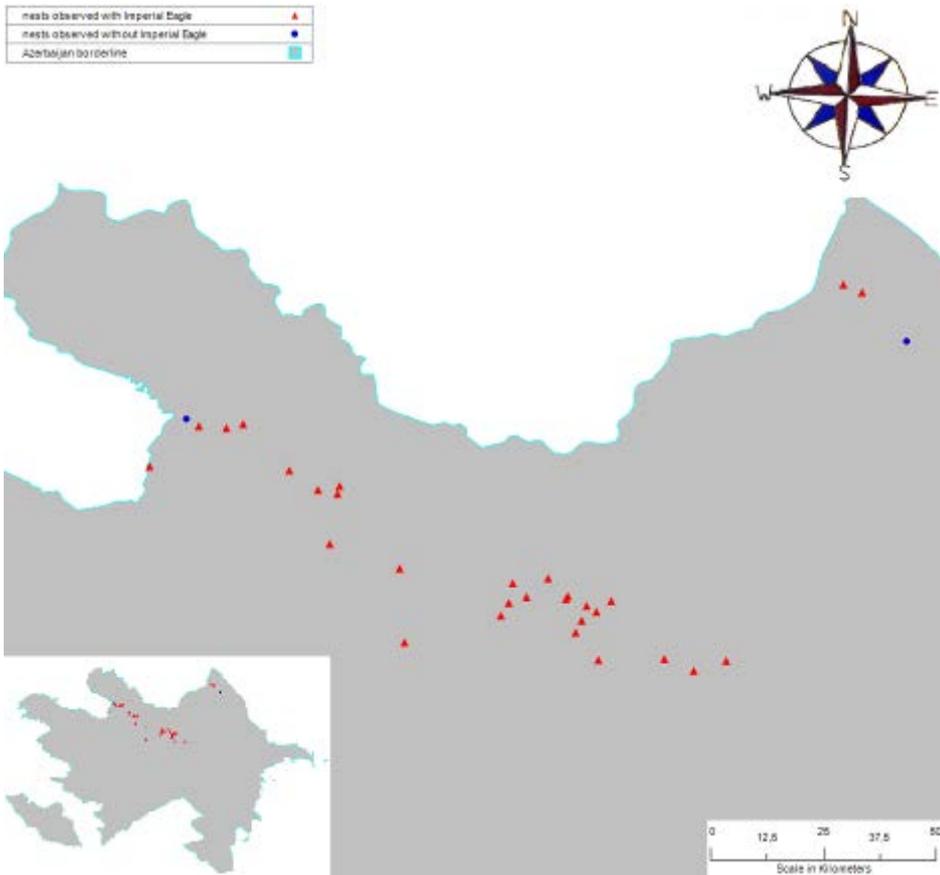
Unfortunately in 2009 we could not begin research in March as it was planned and after appearance of leafs in trees finding of nests of Imperial Eagle began very problematic and not so fruitful as in March or beginning of April when trees still have not leafs. So we began field researches in 2010 already from beginning of March. During March-April 2010 3 expeditions (first decade of March, last decade of March and middle April) on eastern part of Greater Caucasus were organised.

One flying birds was revealed on the territory of Altiagach National Park. Three nests were found in Gusar and Khachmas districts of Azerbaijan near villages Hiloba, Gullar and Shikhlar (see table and map). So new nesting sites for Imperial Eagle in Azerbaijan were found in North-East part of Azerbaijan. In general 6 new nests (4 during monitoring in July of 2009) were found during researches of 2009-2010.



Pic 4. Nest near vil. Gullar, Gusar distr.

| | |
|---------------------------------------|---|
| nests observed with Imperial Eagle | ▲ |
| nests observed without Imperial Eagle | ● |
| Azerbaijan borderline | ■ |



Map. Distribution of researched IE nest to north from Kura River in Azerbaijan



Pic. 4. Nest along the asphalt road.



Pic. 5. Nest near village Gushlar.

Surveys of breeding success (monitoring of nests)

1-6 July 2009 Monitoring expedition in Goychay, Aghdash and Gabala districts was organised on the base of data collected in previous years with participation of Hungarian specialists (*see table 1*). Results of monitoring 14 known and 3 new nests show that 6 from known nests were empty and 3 from them were located close to working quarry which was organised temporarily for contraction of new road. Each nest had from 1 to 3 chicks as rule 2 in age from 6-7 to 9-10 weeks. It is interesting that chicks on trees were as rule older than in nest on electric pylons!



Pic.6. Nest of Imperial Eagle on Electric pylon.



Pic. 7. nest of IE on Electric Pylon, Pic.8. Left nest, vil. Gullar, Gusar distr., poplar tree vil. Garabeyli.

Food ration of chicks was possible research agree to lefts of eagles' food which we could see under the trees with nests. Food of chicks (and adults) included hedgehog, grass lizard, hare, magpie, chickens, lefts of small passerine birds (blackbird, starling etc), woodpigeon, left of animals killed by cars on asphalt roads if nest was located close to it etc. So during research and monitoring work 3 new nests were found and 14 known nests were monitored for breeding success.



Pic.9. Monitoring of nests with telescope.



Pic.10. 3-rd chick of IE out from nest. vil. Bayramkohali

During 4-13 July 2010 Monitoring of breeding success were organised in Gabala, Aghdash, Gusar and Khachmas districts of Azerbaijan. In general 10 nests were monitored. From them 2nests had 3 chicks already out from nest but on the same tree and 1 had 2 chicks. 1 nest (Gullar village) was destroyed by locals, one was empty and the body of chick of 4-5 weeks age was found under the nest and all others were

already empty. In 2 cases we definitely know that breeding was successful. We suppose that so early leaving of nests by chicks connected with extremely hot summer in 2010. already from beginning of June temperature achieved 30-35 C and it continue up to end of July so chicks tried find more cool places and left nests earlier. Connected with earlier leaving of nests only in 2 cases we could identify lefts of food of Imperial eagle under the nests. In all other case dense grass or wheat field prevented finding of lefts (*see table*).



Pic.11. Left of food of IE under the nest near vil. Bayramkoha



Pic. 12. Left of food of IE, Aghdash distr.

Identify threats through observation and interviews with locals

Meetings and interviews with locals gave important information about main threats for imperial Eagle in Azerbaijan. There were cases when we could not find nest during monitoring. Talks with local showed that they destroyed nests because if nest located close to village the Eagle very often takes chickens and turkeys from village. Received information show that local people as rule can not shot the Eagles because they mainly have not gun and even gun for hunting of game birds is not so dangerous for eagles because they fly quit high and their feathers extremely hard for shot.

Another important threat cutting of trees or their branches where Imperial Eagle built the nest. This connected with specific of ecology of this bird. They often prefer single tree in field or one tree in small group of trees in field or some open place. In these conditions people have deficit of wood and sometime they cut this tree for their needs in this case bird lose nest and try find new tree for nesting of this occur not so late for repeat breeding.

All other possible threats: food lack, direct hunting, poisoning etc are not actual in conditions of Azerbaijan.

Regular monitoring of nests and the habitats of Imperial Eagle

Local groups of activists of AOS were organised in Ismailly, Gabala-Aghdash and Khachmas districts for regular monitoring of nests and habitats of Imperial eagle and

informing of central office of Azerbaijan Ornithological Society about threats for Imperial Eagle. On the base of this information we organised monitoring search for nests in 2010 year and received information about some nests which were already left by birds when we did monitoring. In Gabala-Goychay-Aghdash districts leaders of groups were Muhammad Hashimov and Nahid Abdurahmanov. In Ismailly district – Vezirkhan Fataliyev.

Regular monitoring of wintering

Winter monitoring for birds in Goychay, Aghdash and Gabala districts was organised. Birds were not revealed during winter time. Agree to information of local activists some individuals of IE they could see during the wintering. So we suppose that some birds even pairs can be resident for territory of Azerbaijan and so not all birds of breeding population migrate to south for wintering.



Pic.13. Nest of Imperial Eagle near village Kurd, Gabala distr. in winter time.

Update the previous data base created during the first surveys of the project species

All received results during field work of 2009 and 2010 were added in Azerbaijan data base for Imperial eagle of AOS. It is reflected on table 1-3 of this report.

Organize public meetings and seminars at important sites identified for Imperial Eagle

In all regions of research meeting with local people were organised in villages Sarvan, Bayramkohali, Gushlar of Gabala district, village Khanagakh of Ismailly district and vil. Hiloba of Khachmas district (see photo). Besides explanation of importance of conservation of threatened birds species including Imperial Eagle was conducted during all field work for local people working in fields and having interest to our work.



Pic. 14. Discussion with local people in vil. Lagich, Ismailly distr.

Press releases

Press release in Azeri about main results of implementation of project is prepared in Azeri language and will be distributed in Mass media from September when majority of people will return from holidays and more people will read newspapers and check Internet news.

Post project activities

Prepare and send the financial and activity report

This activity report is finished 30 July 2010 and sent to Rufford foundation together with financial report with scanned copies of all receipts (see Appendixes).

5. Conclusion and recommendations.

Connected with late start of project field study for finding of nests in 2009 was not successful but monitoring of nests in July 2009 gave quit good results about number of chicks (.. in average) leaving the nest and about food ration of Imperial Eagle in Azerbaijan (important number of grass lizard also chickens and turkeys together with passerine birds. Pigeons and small mammals).

Study in 2010 was more successful and new nesting region of these birds in Azerbaijan was found – North-East region (Guba, Khachmas and Gusar districts, plane and foothill belt). Monitoring of nests in 2010 showed that birds left the nests earlier than common connected with extremely hot weather. Majority of nests were empty already in first decade of July.

In general birds prefer nesting on very high trees up to 35-40 m height (in Gallery or Tugay forests along the rivers) of poplar. Rarer they use oak or other trees (Ulmus etc.). But in open landscape far from forest they can use single tree in field or even along the road with height only 15-20m. They build the nest as rule on height about 20-25 m but if tree is only 15-20 m the nest can be only in 10 m upper the ground.

Connected with specific of its ecology Imperial eagle very easy adapted to people and build nests very close to village and sometimes just on border of village. But it also creates threat for this birds – main threat is just destroying of nests by people sometimes together with tree.

Some birds in open landscapes on the plane use electric pylons for nesting. In this case height of nest approximately 15-20 m the same as on the single trees in fields. Food supply is not problem for IE in Azerbaijan and breeding success quit high in every year. The average number of chick in nest in beginning of July, before leaving of nest is 1, 8-1, 9.

For more successful conservation of IR most important keeping single trees in fields for their nesting and public awareness work between local populations for preventing destroying of nests located close to villages.

Table. Monitoring of Imperial Eagle in Goychay, Gabala, Aghdash districts 1-6 July 2009 and in Aghdash, Gabala, Gusar and Khachmas districts 4-13 July 2010

| | District | HABITAT | NEST | Name | Monitoring 1-6 July 2009 | Food and notes | Monitoring 4-13 July 2010 | Food and notes |
|-----|----------|---------------|----------------|------------------------|---|---|--|---|
| 1. | Goychay | foothill | electric pylon | Garabeyli | 01.07.09, 2 nestlings , 6-7 week | No left of food under the nest | | |
| 2. | Goychay | foothill | electric pylon | Gubakhalilli | 2 nestl. , 6-7 week (changes location further) | -"- | | |
| 3. | Goychay | foothill | electric pylon | Garamaryam | Empty (2 nests close) | Already 5 years use -- | | |
| 4. | | valley | poplar | Savalan-north | 2 nestl. 9-10-weeks (big!) | - | 2 nestlings 10 weeks age and 1 adult | |
| 5. | Gabala | valley | poplar | Savalan - South | living | - | Already left by birds (2 chicks were) | |
| 6. | Gabala | solitary tree | Ulmus | Gushlar | 1 nestl , 9-10 week | | Empty , 1 dead chick near 4 weeks age under the nest | |
| 7. | Gabala | solitary tree | poplar | Bayramchokhali - North | 3 nestl! , 10 week | hedgehog -4, chicken, grass lizard-2,hare-1 (skull) | 3 nestlings 10 weeks age, all sit on the tree but out from nest. One together with adult bird (near 20 m from ground) and 2 separately just in 5 m from ground | The wheat fields still were not harvested so any lefts under the nest were not possible to see. |
| 8. | Gabala | solitary tree | poplar | Bayramchokhali - South | 1 or more nestl | Hedgehog under the big tree in 200 m from nest | 1 nestling -9 weeks age, | Feathers of chicken (1) and Corvidae birds (2); 1 adult bird left nest during our arriving |
| 9. | Goychay | valley | poplar | Goychay 2 | Empty | Disturbance from working quarry in river valley | | |
| 10. | Goychay | valley | poplar | Garachay | Empty | Disturbance from working quarry in river valley | | |

| | | | | | | | | |
|-----|----------|--------|----------------------------|---|----------------------------|---|--|------------------------------|
| 11. | Goychay | valley | alder | Goychay 1 | Empty | Disturbance from working quarry in river valley | | |
| 12. | Gabala | valley | poplar | Melikli | Empty | - | | |
| 13. | Gabala | valley | poplar | Kurd Eldarbeyli | Empty | - | | |
| 14. | Aghdash | Plane | Electr. pylon | After vil. Arab ojaghi near v. Meyvecilik | 2 nestl , 6-7 weeks | Grass lizard, magpie, hare, small passerine birds | Empty | |
| 15. | "-" | Plane | | Meyvecilik, in 2 km further to west | 1 nestl , 6-7 weeks | Magpie-1 | Empty | |
| 16. | "- | Plane | Poplar tree, nest, 12-15 m | Between Neymetabad and Sharli | 1 nestl , 9 weeks | hedgehog, magpie (2-), wood pigeon, roller, lumbar vertebrae of small cat or dog (may be killed by car on the asphalt road near nest) | Empty | |
| 17. | Gusar | valley | poplar | Samur-Absheron canal valley, vil. Hiloba | | | 2 nestlings , left (destroyed?) | too late, only crow feathers |
| 18. | Gusar | valley | poplar | Samur-Absheron canal valley, vil. Gullar | | | 1 (2?) nestling , 9-10-weeks (big!) | - |
| 19. | Khachmas | valley | poplar | Gusarchay valley, vil. Alekseyevka | | | not found | |