APPLICATION FORM

Small Grants Fund for Working Groups & Task Forces

For office use only

Application received	
Application assessed	

NOTES FOR APPLICANTS

1. Applications must be reviewed by the relevant EAAFP Working Group or Task Force Chair or coordinator, who will provide a statement of the relative merit of the application against the assessment criteria, prior to submission.
2. Applications will be assessed by at least three members of the EAAFP Management Committee, Technical Committee and/or external referees that are not party to any of the proposals. If the reviewer is affiliated with a proposal, they must recuse themselves from the process.
3. EAAFP Working Group or Task Force are eligible for funding to go towards meetings, research, monitoring, site management, training and CEPA events and materials.
4. Students, with the support of the relevant Working Group or Task Force, are only eligible for funding toward studies being undertaken at a research institution or travel to a conference to present original research.
5. Grants are awarded on the strict understanding that funds will be exempt from institutional administration charges, unless Partner government law so requires.
6. Funds are limited and not all applications may be funded.
7. Applications should be targeted towards EAAFP key species or habitats, regions, or emerging threats or other specified Partnership objectives. All applications should demonstrate how it would contribute to Partnership objectives and the implementation of the Partnership document and Strategic Plan.
8. Applications with in-kind contributions and other matching financial are preferred.
9. The maximum amount annually provided by the Small Grants Fund to an applicant or for a specific project is $5,000 (USD).
10. Conference attendance will be supported to a maximum of $1,000 (USD) and is only for task force or working group members delivering their own work as a presentation, paper or poster.
11. Lead investigators are responsible for obtaining all necessary permits from government authorities, indigenous communities, ethics committees etc., to undertake approved research or monitoring studies.
12. Successful applicants will be required to provide a short write up of their project outcomes in the EAAFP newsletter and website and to report to the relevant Working Group or Task Force, and are strongly encouraged to publish their results in peer-reviewed journals.

Call for proposal is on 3 January. Applications close at 5pm (Seoul Time) on 3 February annually. A follow-up application process may be available 6 months later should funds remain.

Announcements of funding will be made by 3 March.

ASSESSMENT CRITERIA

The merit of applications will be judged on the following criteria, with an overall ranking of 1 (highest priority) to 5 (lower priority) scale:

- The novelty and strength of the science employed
- The likely value of the project to migratory waterbirds and their habitats in the EAAF
- The alignment of the project with priority Single Species Action Plans or overall Working Group and Task Force objectives
- The alignment of the project with the EAAFP Strategic Plan
- The justification for the grant funds requested relative to the overall budget of the project

- The track record of the lead investigator and the likelihood of the project achieving its objectives
- Leveraging of in-kind contributions and other matching financial

ELIGIBILITY CHECKLIST

Are migratory waterbirds and their habitats the focus of your project?	Yes √	No ☐
Will your project improve our understanding of factors important to the conservation of migratory waterbirds and their habitats in the EAAF?	Yes √	No ☐
Have you previously applied for an EAAFP Small Grants Fund?	Yes √	No ☐

If yes, provide details of which award you applied for, and if you were successful how much funding you received:

We were awarded an EAAF small grant in 2018 ($5,812) to conduct a study entitled "Nordmann's Greenshank and Redshank Breeding Ecology Study in the Bay of Schast'e, Sea of Okhotsk, Russia". An agreement was established on 18 May 2018 with the Federal State-Funded Institution of Science, Institute of Water and Ecology Problems, Far Eastern Branch, Russian Academy of Sciences) with the stated purpose: To establish an intensive breeding ecology study on the endangered Nordmann's Greenshank (*Tringa guttifer*, also called Spotted Greenshank) and on the common species Redshank (*Tringa totanus*). By conducting the first year of this study, we developed basic methods and clarified life history traits of these birds that was unknown previously. For example, we learned how to locate nests, and how to capture birds during nesting and brood-rearing, as well as about differences in the feeding strategies of the two species. We determined the number of Nordmann's Greenshanks and Redshanks residing in our study area – and from prior data – determined the number of greenshanks had not changed since 2009. This preliminary work was necessary to know that a sufficient number of birds was present to initiate a full breeding ecology study in 2019. We also found that predators could have a significant impact on Redshank reproductive success and that we needed to be careful when capturing and tagging birds to avoid excessive predation. For the first time, we successfully recorded courtship vocal displays of Nordmann's Greenshank. We began tagging birds to establish a marked population. For example, we captured one non-flying chick of the Nordmann's Greenshank and attached light-level geolocators and coloured rings to 8 adult Redshank. We also collected blood and feather samples from the birds to determine the sex of birds and population characteristics. Beyond the EAAF funds, we raised significant financial and material resources from the Institute of Water and Ecological Problems and the Russian Geographical Society to conduct the 2018 study.

How does this application differ from your previous application?

After the 2018 field season, we formed a Russian Nordmann's Greenshank Task Force during a meeting sponsored by Birds Russia that was held in Moscow during the fall 2018. Here the Task Force developed a long-term strategy to study the Nordmann's Greenshank on their breeding grounds, part of which was to continue the breeding ecology work at our site. Specifically, we will investigate in more detail the nesting ecology of the two species of birds we began in 2018. We will arrive at our camp earlier than last year to better understand the timing of spring arrival and to identify the possible impact local subsistence hunting has on wading birds (spring bird hunting in the Khabarovsk territory is held from 13 to 22 May). We will also stay later to determine when adults depart to the wintering grounds. In 2019 our group will consist of three ornithologists (in contrast to only one ornithologist and two bear guards in 2018). This will allow us to study more birds over a larger area and in more detail. Information collected in 2018 on how to study the species will be fully implemented and adaptively altered, and as such, we anticipate being able to capture many more birds, find more nests, and monitor more broods. Specifically, we will determine the number of Nordmann's Greenshank occupying the area by conducting surveys using audio playbacks during territory establishment (this was not possible in 2018 since no audio tapes were available). We will also attempt to count the number of Nordmann's Greenshanks on the entire coast of the Bay of Schast'e (50 km). This will help us determine the locations and general numbers of Nordmann's Greenshanks that can be compared with population data collected in 2009 (Pronkevich et al., 2011).

In addition, we hope to remove the previously deployed geolocators from eight Redshanks that were equipped with the devices in 2018, providing new information on the migration route and stopover locations for this species. Data on habitat use by nesting Redshank gathered in 2018 (i.e. mounds of mud created by all-terrain vehicles tracks on the road) will help us search for nests more efficiently in 2019. We also plan to use sensors to measure the temperature in the nests of incubating birds to learn more about incubation patterns – such basic natural history is not available for this species. Finally, a new Master's Student, Philipp Maleko, working with Dr. Abby Powell at the University of Florida Gainesville will be joining this study for the first time. His involvement will provide free time and skills to analyse the data coming from this project, as well as additional funds to conduct this study in the future.

Applicants must answer 'yes' to all of the following statements in order to be eligible to apply:

The applicant agrees to provide a final report within 3 months of the completion of the project.	Yes √	No ☐
The applicant agrees to submit 1 – 2 page article and photographs for inclusion on EAAFP's website and/or write a brief article for the EAAFP's newsletter. Photographers will be acknowledged.	Yes √	No ☐

The applicant will acknowledge the support of the EAAFP in any publications, presentations and reports arising from this work. Yes √ No ☐

PERSONAL DETAILS

Title: Mr. (Mr, Ms etc) | Pronkevich (Family name) | Vladimir Valentinovich (Given Name/s)

Institution: Federal State-Funded Institution of Science, Institute of Water and Ecology Problems, Far Eastern Branch, Russian Academy of Sciences (*IWEP FEB RAS)*

Institutional address: 56, Dikopoltsev St. (Street address or GPO Box)

Degree type: Dr.

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PERSONAL DETAILS

Title: Mr. (Mr, Ms etc) | Maleko (Family name) | Philipp Nickolaevich (Given Name/s)

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Degree type: M.Sc.

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Relevant Working Group or Task Force Chair - DETAILS

Title: Dr. (Mr, Ms etc) | Lanctot (Family name) | Richard (Given Name/s)

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Relevant Working Group or Task Force Coordinator - DETAILS

Title: Mr. (Mr, Ms etc) | Li Zuowei (Family name) | David (Given Name/s)

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PROJECT DETAILS

Project Title: Please provide concise and informative title of your entire project (not just the component for which funds are sought)

Nordmann's Greenshank and Redshank Breeding Ecology Study in the Bay of Schast'e, Sea of Okhotsk, Russia

Part A. FOR CONFERENCE APPLICANTS ONLY

Conference Title:	**Location:**	**Date:**
Presentation Abstract (250 word maximum):		

Part B. FOR ALL OTHER APPLICANTS

Details of your entire project (not just the component for which funds are sought) (2.5 page maximum)

1. Objectives:

1. To establish a long-term breeding ecology study of Redshank and Nordmann's Greenshank to estimate demographic rates such as adult survival, mate and site fidelity, natal philopatry, nest survival and brood survival.
2. To evaluate effects of subsistence hunting and to collect additional demographic data on Redshank and Nordmann's Greenshanks breeding in the Bay of Schast'e.
3. To document important staging and wintering sites of Nordmann's Greenshank from resightings of colour-tagged birds.

2. Background:

Nordmann's Greenshank (*Tringa guttifer)*

The Nordmann's Greenshank is listed as endangered in the IUCN Red list of Threatened Species because of its small and declining population (BirdLife International, 2016). Based on counts at migration sites, the population number is estimated at only 1,000 to 2,000 individuals. No complete, systematic counts have been conducted on the breeding or wintering grounds.

The species is known to breed in isolated spots on the Russian mainland along the north and west coasts of the Sea of Okhotsk, in the Nevelski Strait, as well as on the eastern and western coasts of Northern Sakhalin (Nechaev, 1991; Andreev, Kondratiev 2001; Pronkevich, 2008; Pronkevich, Voronov, 2013; Revyakina, 2016). The breeding range has contracted throughout the past century. The species no longer breeds near the southern coast of Sakhalin Island at Aniva Bay (Kuroda 1936; Nechaev 1991), or near Nabilsky, Chayvo, and Baikal Bays on the north and eastern sides of that island. Other areas may have breeding populations but these sites are difficult to access and have not been surveyed.

The best information on breeding birds comes from Sakhalin Island, where a steady downward decline has occurred. Incidental surveys show that the number of breeding birds on the north-eastern coast of the island decreased from 12-15 pairs in 1985-1990 to 1-2 pairs in 2005 (only Nyiski Bay still has breeding birds). Many birds are known to breed along the 40-km stretch of the northwest coast of the island from the Tyk River to the Chernaya River. To date, only 30 to 40 pairs are known to exist, although there is a need to survey more inaccessible areas. The decline of breeding birds in Sakhalin is likely due to habitat degradation caused by reindeer (*Rangifer tarandus*) grazing, forest fires (natural and anthropogenic), geological exploration, development of oil and gas reserves and transportation, construction of roads and settlements near oil and gas pipelines, and pollution of coastal reservoirs, marshes and soil cover.

Only one researcher has specifically studied the breeding ecology of the species. Nechaev (1991) collected the only nesting data to date when he discovered five nests of the species near the mouth of the Evay River (Chayvo Bay) on the northern end of Sakhalin in the 1980s. He collected data that indicated the species is biparental, nests in trees and generally in small groups, and that pairs collectively defend their young. He also noted that the species nests in larch forests and uses nearby areas with a mixture of seaside meadow and tidal zone for adult foraging and feeding chicks. No birds were marked during his investigation. Currently, no information is available on demographic traits such as adult survival, nest and brood survival, mate and site fidelity, or even rudimentary things such as incubation period and parental roles, chick maturation length, display behavior, and other basic natural history.

Information on migration routes and wintering areas of the birds also remain largely unknown, and is limited to where people have surveyed other shorebird species such as the Spoon-billed Sandpiper (see review in Szabo et al. 2016). It is speculated that the entire world population may stage on the intertidal flats of the Rudong coast of the Yellow Sea in China (Bai et al. 2015, Z. Lin, pers. comm.). One Nordmann's

Greenshank had a satellite transmitter attached in Thailand and successfully migrated north but it was uncertain if the bird had reached its nesting area before sensors indicated the tag failed or the bird died (Chenxing and Gale 2017, written communication).

Common Redshank *(Tringa totanus)*

The breeding area of the Common Redshank extends from the British Isles and Iceland to the East to the coast of the sea of Okhotsk and Hokkaido island; to the North to Scandinavia, Kola Peninsula, southern areas of Western Siberia, South-Eastern Transbaikalia, Amur river valley and the West coast of the sea of Okhotsk; and South to the Caucasus, Tien Shan, Eastern Pamir, the Himalayas, Eastern outskirts of Tibet, and North-Eastern China.

In the world, there are 6 subspecies of Common Redshanks, including two in Russia. The Russian subspecies in the Far East is called *Tringa totanus ussuriensis* (Nechaev and Gamova, 2009), and is the subject of this study (hereafter called Redshank). Nesting area of the Asian subspecies extends from the Ural Ridge to the Pacific Ocean. In the Far East of Russia, Redshank are distributed on the western coast of the Sea of Okhotsk (the Gulf of Tugurski, Constantine, Ulbanski, Nicholas, Schast'e), Shantar Islands, Khankai lowland, the coast of Peter the Great Bay, the Northern district of Sakhalin island, and the Kuril Islands. The migration of Redshank appears to occur over the mainland, as the species is very rare along the coast of the Tatar Strait (Yelsukov, 2013). The winter location of the Redshank has not been studied, however it is assumed that it is located in South and South-East Asia. There is only one resighting of a ringed Redshank known. The bird was ringed on the Philippine Islands and killed on the Amur River (McClure, 1974).

The Common Redshank is an abundant or very abundant migrant and nesting species on the western coast of the Sea of Okhotsk. During the 1990 nesting period, 13 individuals/km^2 were present in the coastal meadows in the Tugursky Bay. In July 1989, 123 individuals/km^2 were recorded in the Konstantin Bay. In August 1989, the number of Redshank in the coastal meadows of Konstantin and Ulbansky bays were 100 and 231 individuals/km^2 (Pronkevich, 2009). Breeding Common Redshanks have been located in the Gulf Coast of Konstantine (Voronov, Pronkevich, 1991), where a nest was found on 2 July 1989 and non-flying juveniles were found on 14 July 2012. There is no doubt that this species also breeds in the Bays of Tugursky, Ulbansky and Nikolay (Pronkevich, pers. obs.).

The density of Common Redshanks on the coastal meadows of the Bay of Schast'e was 30 to 60 individuals/km^2 during July 2009 (Pronkevich, pers. obs.). It was the most numerous of all the waders. The Redshank breeding grounds are elevated sections of coastal meadows and various types of coastal moss bogs that are not flooded during tides. The breeding period of the Redshank is long, lasting from the first half of June to the end of July. Vladimir Pronkevich found two Redshank nests on June 27, 2009 and July 1, 2009. These nests were found by accident without much effort. The nest is primitive and consists of a hole in a pile of old grass on a small hill or a bump. Full clutch consists of 4 eggs. Eggs are incubated by the female and the male. Chicks often hatch in late June or first half of July, but the discovery of a nest with fresh eggs on 1 July indicates chicks may hatch even in late July.

Redshank arrive in the spring during the first 10 days of April in the southern regions of Khabarovsk Krai, and in mid to late-May on the coast of the Sea of Okhotsk (Yahontov, 1963; Pronkevich, pers. obs.). Redshank departure from breeding sites begins in the second half of July. In the Bay of Schast'e, the latest birds recorded were in late September and early October (Yakhontov, 1963; Babenko, 2000).

3. Project plan, timeline and methods:

Work schedule:
1. May 13-15: travel from Khabarovsk to the Bay of Schast'e;
2. May 16-July 30: field work in the Bay of Schast'e;
3. August 1-2: departure from the Bay of Schast'e and travel to the city of Khabarovsk.
4. August 3-October 30: analysis of data and preparation of the report for EAAFP.

Participants in field work activities: Vladimir Pronkevich, Konstantin Maslovsky, and Philipp Maleko.

Our study will cover two closely related species: the Nordmann's Greenshank (*Tringa guttifer*) and the Common Redshank (*Tringa totanus*). These species breed in similar habitats with minor differences in nesting location (Redshank nests in scrapes in grassy tufts on the ground while greenshanks nests in larch trees by creating their own nests with gathered sticks and branches). Other than this the two species have similar behaviours and life-histories. Thus we hope to get comparative information about the nesting ecology of these two species, and use the more common, and non-endangered Common Redshank to test any new methods. Due to the endangered status of the Nordmann's Greenshank, we will be extremely careful to not harm individuals so as not to exacerbate conservation issues.

General Methods - Both Species

The research methods of Nordmann's Greenshank and Common Redshank are largely the same. We will study both species using methodologies learned during 2018, while testing a few new techniques on Redshanks first to assess detrimental effects.

Arrival and Habitat Use: In 2019, we will determine the dates of the first spring appearance of Common Redshanks and Nordmann's Greenshanks by conducting daily surveys in our study area. Habitats used by these birds observed will be identified. This is particularly

interesting, because when birds first arrive in May, the coast of the Bay of Schast'e is largely covered with ice and snow. In 2018, the first Nordmann's Greenshank fed on small fish and Common Redshanks fed on small invertebrates. It is important to establish where the arriving birds first forage. We want to understand the changes in the distribution of birds depending on both ice conditions in the Bay and the area of snow cover in the coastal areas.

Nest Monitoring: General location of nests will be located by conducting observation of birds as they fly between foraging areas on the coast and territorial sites located inland. Once a general nesting territory is identified, we will observe the area from hides (concealed tents) to locate birds flying on and off nest sites. This will work especially well for greenshanks that nest in trees. For Redshanks, we will search suitable habitat in the general nesting territories to locate nests. For each Nordmann's Greenshank and Common Redshank nest found, we will record the clutch size, size of the nests and eggs, description of the nest site and nearby vegetation, dates of egg laying and incubation stage (by either finding nests during laying and floating eggs – the latter uses embryo development methods developed by Westerskov, 1950), male and female parental care (based on observations of colour-marked adults), nest fate, and if successful, hatching date. Upon discovery, we will place a sensor (TGP-420 temperature logger with probe) in nests that will record the temperature of the nest 24 hrs a day throughout the incubation period. These data will provide information on incubation patterns and provide information to assess nest fate (i.e., sudden drop in nest temperature can be used to ascertain when adults take incubation breaks and if nests fail prior to anticipated hatch dates). After nests have failed or chicks have hatched and left the nest, we will make detailed descriptions of nests and nesting habitat.

Capturing and Processing Adults: Adult birds often sit on trees, snags and poles while on their breeding and foraging territories. In addition, adults with chicks are very restless, flying in circles around approaching humans, walking on the ground to distract people from chicks; and alarm-calling from elevated structures. They let a human observer approach within 5-10 meters of the brood before becoming very aggravated. These behaviors allow adults to be captured using bownets (see Figure 1) placed on existing and artificial posts. We will also attempt to capture adults by visiting areas where broods are located (but slightly away from the brood center to avoid stepping on chicks) and laying mist nets flat over the vegetation on the ground. Beneath the mist nests we will place chick decoys and play an audio tape of a chick giving distress calls. Brood-tending adults, and sometimes neighboring adults, will visit these areas and can be flushed up into the mist net. For each captured adult, we will collect morphological measurements and weight, a fat score and evidence of incubation patches, photographs, and feather and blood samples. Blood samples will be used to genetically determine sex of adults so that we can ascertain which sex incubates and raises broods. Birds will be marked with colored flags with unique codes as well colored-plastic and metal rings. We hope to learn about where Common Redshanks and Nordmann's Greenshanks migrate by observations of color-banded birds away from the breeding grounds. We will send an alert out on the EAAF Shorebird Working Group listserv for people to watch for our birds and contact us.

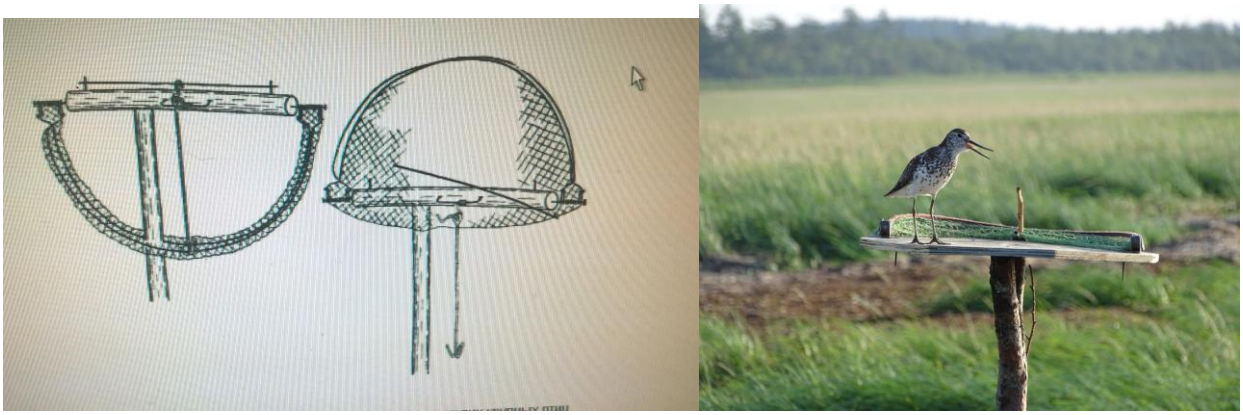

Figure. 1. Illustrative picture of bownet placed on a post, and real life picture of Nordmann's Greenshank visiting an artificial platform where it is about to be caught with a bownet.

Chick Monitoring: Parents typically take their young to coastal areas to forage. Brood-tending adults will be observed with binoculars and a spotting scope and possibly camera traps. We will avoid searching for chicks in tall grass or old patches of algae where they might accidentally be crushed, and instead focus on finding chicks in muddy areas where visibility is high. Chicks frequently venture out of the grass and into the tidal zone devoid of vegetation in the evening hours. Non-volant chicks will be captured, marked and followed over the next 2-3 weeks using regular surveys of coastal areas to determine fledging dates (if fledged prior to our departure from the study area). Surveys will also help determine when adults leave chicks and begin to migrate to wintering sites.

Hunting Impacts: In addition, we will try to research the effect of hunting on both studied species. Beginning in 2018, spring hunting for birds is legal between 12 and 21 May in the Nikolaev area. Hunters prefer to shoot large game-ducks and geese, but wading birds are also harvested in smaller quantities. Wading birds are at the greatest risk of being shot while congregating in large flocks. Nordmann's Greenshanks and Common Redshanks do not form flocks in the spring, therefore, the probability of their subsistence harvest is small. However, in the spring, the Bay of Schast'e is covered with ice and the habitats suitable for foraging waders is limited. One question we seek to answer: Can hunters create obstacles to the stopover and foraging of waders when the tidal zone is covered with ice? We also want to know if the habitats of Nordmann's Greenshank and Common Redshank coincide with the places where hunters typically shoot game. Overall, we want to know if subsistence hunters create a "risk factor" for waders at their stopping and foraging locations. To answer this question, we will investigate where hunting occurs by carrying out inspections and censuses of the birds taken by hunters. We will also collect background and demographic information from the hunters, as well as look at the hunting methods employed. Depending on the scope and scale of subsistence hunting, this research has the potential to be valuable in future management of both species.

Specific Methods - Nordmann's Greenshanks

Nest Searching: Towards the end of May, Nordman's Greenshank perform courtship displays and build nests in larch forests on the coast of the Bay of Schast'e. To find nests, we propose monitoring the movements of birds from permanent observation posts so as to follow birds from feeding sites to nesting habitats. In 2018, we carried out such observations, but we had difficulty determining the location of nests probably due to the low number of birds. In the same year we managed to record the mating call of Nordmann's Greenshanks and the vocalizations of a bird producing a distress call near its chicks. In previous years, we observed the reactions of the Greenshanks to the distress calls and repeatedly observed birds fly out of the forest to the voice of the distressed bird. However, we did not have the opportunity to search for nests. In 2019, we will search for nests along the routes used by the Greenshanks when coming to a distress call and will also use playback recordings of Nordmann's Greenshanks voices to solicit territorial responses and help elucidate the territory boundaries of individual pairs, thus helping to pinpoint nest locations.

Nest Monitoring: Nordmann's Greenshanks nests will be monitored them with caution. Because we do not know how Greenshanks react to humans, we are worried that the birds might abandon the nest. Due to this danger, we will carry out observations of the nest at a great distance using a blind and a spotting scope. The probability of abandoning a nest by a bird is high in the first half of the incubation period. Therefore, we will not disturb the birds in the first half of the incubation period. During the latter part of incubation, we can approach the nest more often when probability of abandonment is lower. We can then put a camera trap near the nest and attempt to follow the actions of the nesting pair to answer the following questions: identification of predators of nests, the participation of male and female in the incubation process, the duration of the incubation period, dates when nests hatch, how long chicks spend in the nest after hatching, and the date chicks leave the nest.

Capturing Adults: Besides the procedures outlined in the general methods above, we will also record the voice of each bird and relate this to its sex (determined by genetics later). This may help us better understand the male and female roles in raising chicks. We will also investigate ways to capture birds in late May and early June before hatching begins. This will depend on how the birds will respond to the recording of the mating calls and effectiveness of other traps deployed.

Transmitters: We will not deploy transmitters or light geolocators on this rare species in 2019 but may consider this in future years. For example, we hope to obtain information on breeding site fidelity by marking adults, which is essential for deploying archival tags that recover birds to be recaptured. Additionally, we will evaluate how well Redshanks carry geolocators on their leg flags to determine whether this is a potential approach for tracking greenshanks.

Survey of Bay of Schast'e: Depending on the number of birds with broods and the arrival of other people, we will conduct a survey of Nordmann's Greenshank on the entire coast of the Bay of Schast'e. We will compare our observations to survey work conducted in 2009 (Pronkevich et al., 2011). Surveys will be conducted between 5 and 10 July, and involve two observers whom will walk along the shore of the Bay and count Nordmann's Greenshank and other birds. If broody adults are found, we will pause the survey and attempt to capture the adults. In parallel with this group, a boat with two people will go by sea at high tide. They will delivery supplies for themselves and the group walking the survey route. The total length of the route along the shore will be about 50 km and requires about three days to survey in its entirety. This survey will provide information on occupancy, habitat use, and abundance, as well as inform when adults leave chicks to start their migration towards the stopover and wintering grounds. For bear protection, both groups will spend the night together in small houses belonging to subsistence hunters on the shore of the Bay (located during the winter time with snowmobiles). The two groups will then return to the base camp by boat. Observers will always stay in groups of 2+ people, with at least one person having a weapon to protect themselves and equipment from bears.

Specific Methods - Common Redshanks

Nest Searching: In early June, we will start searching for Redshank nests in the coastal meadows by looking on the ground, often in the tracks left by all-terrain vehicles.

Capturing Adults and Chicks: Besides the methods outlined above, we will capture incubating adults with bownets placed over nests during late incubation but only after replacing the real eggs with artificial eggs. We will also capture and mark chicks at nest sites.

Geolocator Retrieval and Analysis: We will search for birds tagged with light geolocators in 2018 and attempt to capture them to remove their tags. Data retrieved from the geolocators will be analyzed using FlightR or other similar programs that investigate light level changes so as to obtain information on the migration routes and stopovers of these birds.

4. Likely benefit to conservation of migratory waterbirds and their habitat / or key research outputs:

Our study will benefit the conservation of migratory waterbirds in several ways.

First, the study of the breeding ecology of the endangered Nordmann's Greenshanks will help us learn about the species breeding ecology and factors likely limiting their population growth. For example, we will learn if local hunting is having a negative effect of the species when they first arrive on the breeding grounds. We will also obtain information on nest survival and brood survival, and in the long-term adult survival, will help us determine whether the species population growth rate is restricted on the breeding range, wintering range, or both.

Beyond these demographic parameters, we will learn natural history information on the species nesting ecology, behaviour and use of different habitats during spring migration, nesting, and during brood-rearing. Knowledge of nesting ecology will help preserve the endangered species as it may contain management implications. We anticipate this project going on for another 2-3 years and anticipate that our methods (and results) will only improve as we test different ways to locate nests, capture birds, and track broods.

Second, we will generate information on the distribution of Nordmann's Greenshanks along the Bay of Schaste', which can be compared to estimates made in 2009. This will determine if this population has declined in the local area. In addition, we will work toward improving our survey procedures so that these techniques can be used in other portions of the species breeding range. For example, we will test whether using a voice recording of a distressed bird is more likely to elicit a response from a breeding pair.

Third, we will simultaneously learn information on the Common Redshank. Although thought to be less of a conservation issue, this species' breeding ecology is also poorly known and our study could indicate issues of concern. The Common Redshank will also serve as a model species that we can safely test research methods before applying them to the endangered Nordmann's Greenshank. These two species are closely related, use similar habitats, and have similar behavior. New knowledge about the nesting ecology of the Common Redshank species will be obtained and knowing its nesting ecology, we can understand the peculiarities of its life history, ecology, and behavior and perhaps extend this information towards the conservation of the vanishing Nordmann's Greenshanks. For example, we can experiment with Common Redshanks as a surrogate parent in the future. We know that these two species jointly protect the area near chicks from predators.

Fourth, we will obtain information on the movements of Nordmann's Greenshank and Common Redshanks away from our study area. We anticipate being able to recapture some of the 8 Common Redshanks that were equipped with geolocators in 2018. Information from these tags will determine migratory routes, stopover timing and locations, and important wintering areas; as well as help us assess the feasibility of using archival geolocator tags on Nordmann's Greenshank. In addition, colour-tagged Common Redshanks and Nordmann's Greenshanks will give us information about the return of birds to breeding sites, and if birds are seen away from the breeding grounds, will give us information on areas used for nonbreeding.

And finally, we will supplement information collected in 2018 to promote the creation of a protected natural area in the Bay of Schast'e (Figure 2). Indeed, surveys in 2018 identified the bay as important area to protect due to the large species diversity and number of birds (exceeding 20,000 individuals) using the area, as well as the presence of rare nesting species such as the Nordmann's Greenshank and Steller's Eagle. In 2019, we plan to prepare an ecological and economic justification for the organization of a specially protected natural area in the Bay of Schast'e. The creation of a protected natural area is included in the plan of the government of the Khabarovsk territory.

Figure 2. Scheme of the planned protected area in the Bay of Schast'e.

5. Alignment with EAAFP priorities:	This project supports two priorities within the 2019-2020 Shorebird Working Group's priority list. This includes priority 1 that states "Support the identification and monitoring of internationally important shorebird sites, and priority 2.2 that states "Develop a conservation plan, support the survey and monitoring of important sites, and work towards developing a task force for Nordmann's Greenshank along the flyway."
6. Explain the part of your project for which you are seeking funds in this application:	Funds from the EAAF Small Grant program are essential for providing fuel, food and other items for this project to move forward. Additional logistical funds are provided by the Institute of Water and Ecological Problems, the Wildlife Conservation Society, and the University of Florida Gainesville.

7. Scientific References cited in the application:

Andreev, A.V., and A.V. Kondratiev. 2001. Birds of the Koni-Pyagyn and Malkachan areas // Biodiversity and Ecological Status along the Northern coast of the Sea of Okhotsk. Vladivostok: Dalnauka. P. 87-122.

Babenko, V. G. 2000. Birds Of Lower Amur Region. M.: 1-725 p.

Bai, Q., J. Chen, Z. Chen, G. Dong, J. Dong, W. Dong, V.W.K. Fu, Y. Han, G. Lu, J. Li, Y. Liu, Z. Lin, D. Meng, J. Martinez, G. Ni, K. Shan, R. Su8n, S. Tian, F. Wang, Z. Xu, Y-t. Yu, J. Yang, Z. Yang, L. Zhang, and X. Zeng. 2015. Identification of coastal wetlands of international importance for waterbirds: a review of China Coastal Waterbird Surveys 2005-2013. Avian Research 6:12 https://doi.org/10.1186/s40657-015-0021-2.

BirdLife International. 2016. *Tringa guttifer*. The IUCN Red List of Threatened Species 2016:eT22693225A93391729. http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22693225A93391729.en (Downloaded on 18 October 2017).

Kuroda, N. 1936. On a new breeding ground for *Pseudototanus guttifer* // Tori. Vol. 9 No. 43. P. 232–238.

McClure, H. E. 1974. Migration and survival of the birds of Asia. – Bangkok, SEATO Med.-Res. Lab. 476 p.

Nechaev, V.A. 1991. Birds of Sakhalin Island. Vladivostok: FEB AS USSR. 747 p.

Nechaev, V. A., and T. V. Gamova. 2009. Birds of the Russian Far East (an annotated catalogue). Vladivostok: Dalnauka. 564 p.

Pronkevich, V. V. 2008. Nordmann's Greenshank *Tringa guttifer* (Nordmann, 1835) // Red book of Khabarovsk Krai. Khabarovsk: Publishing house "Priamurskie Vedomosti". P. 474-475.

Pronkevich, V. V. 2009. Fauna and population of birds of the Evoron-Tugur lowland. Ph.D. dissertation. Khabarovsk: IWEP FEB RAS. 225 p.

Pronkevich, V. V., Voronov B. A., Atrokhova T. A., Antonov A. L., Adnagulov E. V., Oleinikov A. Yu. 2011. New data on rare and poorly know birds in Khabarovsk territory // Vestnik of the North-East Scientific Center FEB RAS. P. 70-76.

Pronkevich, V. V., B. A Voronov. 2013. The status of the number Nordmann"s Greenshank *Tringa guttifer* (Nordmann, 1835) on the territory of the Khabarovsky Krai // Man and nature: aspects of harmony and contact angles: materials of the II All-Russian scientific-practical conference (26 November 2013). Komsomolsk-on-Amur: AGPGU. P. 51-56.

Revyakina, Z.V. 2016. Nordmann's Greenshank – *Tringa guttifer* (Nordmann, 1835). Red book of the Sakhalin region: Animals. M.: Buki Vedi. P. 89-91.

Szabo, J.K., P.F. Battley, K.L. Buchanan, and D.I. Rogers. 2016. What does the future hold for shorebirds in the East Asian-Australasian Flyway? Emu 116:95-99.

Voronov, B. A., V. V. Pronkevich. 1991. On some ornithological findings in the Khabarovsk region // Bull. MSN. Biol. M. Vol. 96. No. 5. P. 23-28.

Westerkov K., 1950. Methods for determining the age of game bird eggs // Journal of Wildlife Management. V. 54. P. 627-628.

Yakhontov, V. D. New data for the ornithofauna of the Lower Amur river // Questions of geography of the Far East. Vol. 6. Khabarovsk, 1963. P. 215-223.

Yelsukov, S. V. 2013. Birds of North-Eastern Primorye: non-passerines. Vladivostok: Dalnauka. 536 p.

Part C. FOR ALL APPLICANTS

Experience Relevant to Project (0.5 page maximum): - Please attach a maximum 2-page CV or list all non-academic research experience and experience with migratory waterbirds/conservation e.g. work experience, volunteer experience, bird banding, bird-watching.

Dr. Vladimir Valentinovich Pronkevich Ph.D.

vp_tringa@mail.ru

Education:

Irkutsk Agricultural Institute

B.S. Biology and Hunting (1985)

Ph.D. Thesis: “Fauna and population of birds of the Evoron-Tugur lowland (Khabarovsk territory, Russia)” (2009)

Employment:

Senior researcher in the laboratory of animal ecology of the Institute of Water and Ecological Problems (Khabarovsk, Russia).

Full-time researcher at several nature reserves in Khabarovsk Krai as well as "Bolshekhekhtsirsky", "Komsomolsky", and “Anyuisky” national parks.

Research:

2019: Plan to conduct an ecological and ornithological survey of the airport of the city of Nikolaevsk (West coast of the Sea of Okhotsk).

Present Day: Cooperating with Japanese colleagues in tagging the White-tailed Eagle with coordinate sensors.
Present Day: Conducting joint research with our Chinese colleagues to monitor the number of waterfowl in Russia and China.
Present day: Regularly monitor the number of the White Stork on the territory of "Natural Park "Sheremetyevsky", the reserve "Stork" and other territories of the Khabarovsk territory.
Present Day: I and the staff of our Institute are preparing a justification for the organization of a specially protected area in the Gulf of Schast'e in the Sea of Okhotsk.
Present day: Conduct an inventory of the colonial settlements of the Great Cormorant and the Gray Heron on the Lower Amur region.
2017-2018: Performed ecological-ornithological inspection of the airport of Khabarovsk.
2015: Monitored populations of waterfowl at large lakes in Khabarovsk Oblast- Bolon, Evoron, Gussie, Chukchagirskoe, Udyl; and major rivers - Amur, Khor, Anyui, Kur, Gur, Amgun, Tugur.
2006-2009: In the Southern part of the Khabarovsk territory under my supervision a group of students ringed ~13,000 birds. Including two birds from China, and one from Republic of Korea.
Carried out accounts of water birds and found out the distribution of birds of prey in several large Sea Bays in the Western part of the Sea of Okhotsk (Udskay Guba, Tugur, Konstantin, Ulbansky, Nikolay, Schast'e, as well as the Amur River estuary).
Conducted surveys of the distribution of nests of Steller's Sea Eagles in the area from Konstantine Bay to the Amur estuary (~ 600 km of coastline).

Accomplishments:

To date, our Institute has concluded agreements on joint research with a number of organizations in China and Mongolia.
Identified the breeding distribution of Gray Heron and Black-crowned Night-heron colonies on the Lower Amur territory.
Established population dynamic trends on many waterfowl species in Khabarovsk Oblast.
Established a known breeding area of Nordman's Greenshank, Eurasian Oystercatcher, Common Ringed Plover, Swan Goose, Starlings on the Sea of Okhotsk.
Revealed the number, and distribution of the Scale-Side Merganser on many rivers of the Khabarovsk territory.
Prepared an ecological and economic justification for the organization of specially protected natural areas: Natural Park of Sheremetyevsky, Wetland of Lake Evoron and the Evur River, Sea Bays of Ulbansky, Nicholas and Constantine of the Sea of Okhotsk.
Compiled a scheme for the distribution of nests of the White Stork in the Khabarovsk territory.
Established breeding territories of the number of new species in the southern part of the region – the Great Egret, and the Black-crowned Night Heron.

Publications:

The author of more than 100 publications, most are devoted to waterfowl and shorebirds.
The author of 30 articles in the Red Book of the Khabarovsk territory.
Co-author of the collection on the marine IBAs of the Far East.
Co-author of four article for the new edition of the Red Book of Russian Federation.
Published about the peculiarities of spring migration of passerine birds in the southern part of the Khabarovsk territory.

Grants:

Grants have been received from World Wildlife Fund (WWF) and the Government of the Khabarovsk Territory for research on White Storks.
(2016-2018) Wildfowl and Wetlands Trust (Slymbridge, UK) - Study the distribution of a rare species of world fauna - the Scale-Side Merganser.

(2016, 2018) Received major grants from the Russian geographical society for the search of IBAs in the Western part of the Sea of Okhotsk and the preparation of studies for the organization of specially protected natural areas.

Mr. Philipp Nickolaevich Maleko
Email: Malekoph1@gmail.com

Education:

University of Florida, Gainesville - Florida Cooperative Fish and Wildlife Research Unit
Graduate Research Assistant **(01/2019-Present)**
Overview: The conservation goal of this M.Sc. project is to better understand the breeding and migration ecology of two shorebirds [the globally endangered Nordmann's Greenshank (*Tringa guttifer)* and locally abundant Common Redshank (*Tringa totanus)*] in eastern Russia (Sea of Okhotsk). The objective is to influence habitat conservation policy and management throughout the East Asian-Australasian Flyway (EAAF). **Advisor:** Dr. Abby Powell (abbypowell@ufl.edu)

University of California, Davis **(09/2014-09/2016)**
B.S. in Wildlife, Fish, and Conservation Biology (Cumulative G.P.A. - 3.26/4.00)

Research Experience:

Avian Surveyor **(08/2018-11/2018)**
University of Southern Mississippi - Migratory Bird Research Group

- Surveyed for any and all avian species by sight and sound on a 300 meter transects.
- Assisted with mist-net extraction with subsequent banding of any and all caught birds.
- Conducted migratory bird resource assessments (floral and faunal).

Shorebird Research Technician **(05/2018-08/2018)**
United States Fish and Wildlife Service

- Found Lesser Yellowlegs territories and nests, captured adults tending to broods; as well as banded and equipped with GPS tags and engraved flags.
- Assessed nest density, nesting success, site and mate fidelity, survival, productivity, and other life history parameters by capturing and re-sighting various breeding shorebirds.
- Captured and banded both chicks and adults colored and USGS metal bands.
- Attached GPS tags, geolocators, and engraved flags on various shorebirds.
- Re-sighted and captured Rusty Blackbirds and Blackpoll Warblers.

Avian Surveyor **(03/2018- 05/2018)**
University of Southern Mississippi - Migratory Bird Research Group

- Same duties as USM position above but for spring migratory passerines.

Wildlife Research Project Manager **(09/2017-12/2017)**
University of California, Davis

- Researched treatment effects on the food availability for waterfowl on rice and corn fields throughout various counties in Central California.
- Managed a crew of technicians setting up line-intercepts and taking soil cores.

Waterfowl Research Technician **(06/2017- 08/2017)**
Ducks Unlimited Inc.

- Extensive sampled Bakken basins to identify various waterfowl broods down to species, age class, and brood size guided by satellite maps.

- Assessed basin vegetation, percent wet, class type, and visibility.

Wetland Survey Technician **(03/2017- 06/2017**)
Missouri River Bird Observatory

- Encouraged private landowners to participate in the wetland reserve easement (WRE) program by demonstrating the value of their properties for migrating and breeding birds.
- Surveyed all species seen and heard on transects throughout both migration and breeding season, with the data recorded on the ArcGIS collector app on an iPad.
- Performed playback point counts, once per transect at ideal emergent marsh habitat.

Research Field Technician **(09/2016- 11/2016)**
University of Wyoming, Laramie

- Studied the Cassia Crossbill ecology and behavior in the Albion and South Hills mountains of Southern Idaho.
- Conducted red crossbill point counts, population estimation, and habitat assessments.

Research Field Technician **(03/2016- 08/2016)**
University of California, Davis

- PIT tagged, banded, and took blood samples on adult female wood ducks.
- Took measurements of wing chord, tarsus length, total tarsus length, culmen length and width, eye stripe length and width; checking fat deposits, molt stage, and breeding condition of adult females.
- Measured quantity, mass, length, width, and development of wood duck eggs.

Research Field Technician **(03/2016- 07/2016)**
University of California, Davis

- Conducted a songbird nest box study of western bluebirds, ash-throated flycatchers, white-breasted nuthatches, tree swallows, and house wrens.
- Checked the state of the nest, the development of the chick and adults, banded the chicks and adults; and took measurements of wing chord, skull, culmen, and tarsus.

Research Field Technician **(03/2016- 07/2016)**
University of California, Davis

- Studied Dusky-footed Woodrat nest bequeathal and population dynamics at Quail Ridge Reserve.
- Hiked rough and steep terrain to set up RFID readers, change batteries, trap woodrats at over 40 sites, PIT tag, radio collar, ear tag, and measure foot, ear, and tail length.
- Determined sex and reproductive status of the woodrats.

Songbird Trapping and Banding **(June 24-26, 2016**)
University of California, Davis

- Trapped, processed, and banded of over 1500 Tricolored Blackbirds (*Agelaius tricolor)*.

Honors, Awards, Misc.:

- Citation for Outstanding Performance in recognition of outstanding undergraduate accomplishment in Wildlife, Fish and Conservation Biology from the University of California, Davis. June 2016.

PROJECT BUDGET (please outline your entire project, not just the component for which funds are being sought)

	Item (Please list)	$ Budget (in USD)	Current support / Requested Support (source and amount)	Requested support from EAAFP (source and amount)
Equipment Consumable items	Batteries (36AA) x 113 (1.35/unit)	$153	--	$153
	Clothes and Shoes	$420	--	$420
	TGP-420 temperature logger with probe ($100/unit)	$1,000	--	$1,000
	Equipment[1]	$1,500	$1,500	--
	In-kind equipment[2]	$43,000	$43,000	--
Food	3 people x 82 days x $12.63/day	$3,107	--	$3,107
Travel and accommodation	Fuel (electric generator)	$80	--	$80
	Fuel and Oil (Boats)	$170	--	$170
	Gas (cooking)	$70	--	$70
	Flight and per diem (Philipp Maleko – Florida to Russia, and $25/day per diem)	$4,000	$4,000	--
	Field travel[3]	$1,550	$1,550	--
Salary / Tuition	Philipp Maleko Research Assistantship support, University of Florida Gainesville (2019 school year)	$14,209	$14,209	--
	Philipp Maleko Tuition Waiver, University of Florida Gainesville	$8,077	$8,077	--
Total amount requested from Small Grants Fund: (All amounts in USD)				$5,000

[1]Equipment provided by Vladimir Pronkevich, and the Institute of Water and Ecological Problems.
1. Sleep Mattresses - $100
2. Ammunition for weapons - $100
6. Production of automatic traps (10 unit) - $300
7. Production of the metal furnace for a bath - $300
8. Material for repair of premises - $100
4. Propellers (x3) for the Suzuki motor - $400
6. Satellite communication services - $100
8. Mosquito repellent - $100

[2]In-kind Equipment provided by Vladimir Pronkevich, and the Institute of Water and Ecological Problems.
1. Vladimir Pronkevich will provide his personal car and trailer to transport people and supplies to the Bay of Schast'e to: a). investigate places to overnight during summer survey and check out field camp cabin, b) establish summer field camp, c) return car to Khabarovsk after field camp set up, and d) travel to the city of Nikolaevsk for supplies. $17,000
2. Vladimir will provide snowmobile and sled to visit Bay of Schast'e in winter to investigate places to stay during summer survey and to cut firewood for summer field season. $20,000
3. Photo traps - 3 pcs. $700
4. Boat and motor "Suzuki" – 1. $3,500
5. Satellite phone – 1. $700

6. Electric generator – 1. $200
7. Quadrocopter - 1. $1,300

[3]Field Travel provided by the Institute of Water and Ecological Problems.
1. Accommodation on route Khabarovsk - Nikolaevsk - $200
2. Accommodation at the Nikolaevsk - $300;
3. Meals during the winter trip to the Bay Schast'e - $200
4. Train fare for Konstantin Maslovsky to travel from Vladivostok to Khabarovsk and back - $150
5. Fuel costs for the car Khabarovsk-Nikolaevsk-Khabarovsk and trips to Nikolaevsk. In winter, spring and summer. — $700.

Budget justification: Please provide brief description and justification of all major budgetary items requested, indicating any that are essential to the project and/or conference for which you are applying (250 word maximum):

1. Batteries are needed for cameras and photo traps. In total it is planned to buy 113 pieces. One set of batteries for the camera trap is 12 pieces. We have three photo traps. One charge three camera traps need 36 batteries. Batteries are also needed for headlamps. GPS-navigator.
2. For equipment of two young specialists it is planned to buy anti-encephalitis suits and two pairs of boots (warm and long). This requires $420 dollars.
3. Temperature sensors are needed to monitor incubation patterns and nest fate. Sensors cost $100 each x 10 = $1000
4. Our field meals will be $12.60 per day per person. Up to a total of $3,107.
5. To operate the generator for 2.5 months, we need 100 litres of gasoline. The total amount is $80. The generator is necessary for charging cameras, lighting, satellite phone.
6. For field work we need gasoline to power motor boats. Boats are needed to reach the field camp,retrieve drinking water, to visit a store for supplies, and for conducting surveys at Schaste' Bay. In total, we plan to buy 200 litres of gasoline for a total of $170.
7. For cooking we need gas. We're planning on buying 70 small cans of gas.

DECLARATION

I have discussed the contents of this application with the relevant Chair/s and Coordinator/s of relevant Working Group and/or Task Forces and I certify that to the best of my knowledge all documentation and information submitted or made available by me is true, accurate and complete.

By ticking the following box you are agreeing to the above statement: √

APPLICATION CHECKLIST

All relevant sections of this application have been completed	Yes	√	No	☐
Full payment details have been provided on the final page	Yes	√	No	☐
Application is being submitted electronically as one single document	Yes	√	No	☐
Application is being submitted in either MS Word or PDF file format (it is important that text can be copied – please do not scan this form)	Yes	√	No	☐
Application has been discussed with the relevant Chair/s and Coordinator/s of relevant working Group and/or Task Forces and these have been carbon copied (cc) to this application submission as evidence they have seen and approved this application.	Yes	√	No	☐

Applications that do not comply with these guidelines will be returned to the applicant.

APPLICATION SUBMISSION

Please email your application as a single document to:
secretariat@eaaflyway.net

EAAFP will acknowledge the receipt of your application.

Applications close 3 February 2019
Results will be announced in 3 March 2019

OFFICE USE ONLY:

Decision: _____

Authorised: __ / __ / __ _____

Entered: __ / __ / __ _____

Comments: _____

Lead Investigator Advised: __ / __ / __ _____

PLEASE COMPLETE PAYMENT DETAILS ON FINAL PAGE

PAYMENT DETAILS

To ensure prompt payment of successful applications please complete the following details and submit with your application.

PREFERRED PAYMENT METHOD

Electronic funds transfer (EFT)

GRANT CONDITIONS

In accordance with the application criteria, the following conditions must be met:

- Funds are to be strictly exempt from organisational administration charges.
- You are required to submit one copy by email of the final report within 3 months of the completion of the project.
- You are required to acknowledge the EAAFP and the Small Grant Fund in any presentations, publications, reports or promotional material arising from this work. Please email secretariat@eaaflyway.net in order to obtain an electronic copy of EAAFP logo for use on any display material you will be preparing.
- You may be requested to write a brief article for the EAAFP newsletter.
- You are required to provide EAAFP with an electronic copy of your final report at the completion of your project, as well as a copy of any publications that result from your grant.