



Research Networking Programmes

Short Visit Grant or Exchange Visit Grant

(please tick the relevant box)

Scientific Report

The scientific report (WORD or PDF file – maximum of eight A4 pages) should be submitted online within one month of the event. It will be published on the ESF website.

Proposal Title: Demographic inference from whole genome sequences of killer whale ecotypes

Application Reference N°: 7216

1) Purpose of the visit

The purpose of the visit was to apply the fastsimcoal2 program to my genomic data for killer whales to infer their demographic history. I had previously used two other methods for inferring the demographic history for individual populations each of which had identified a steep decline in effective population size during the late Pleistocene. Fastsimcoal2 would allow us to better infer if these declines were due to changes in connectivity between populations or due to extrinsic factors such as climate change.

2) Description of the work carried out during the visit

Fastsimcoal2 uses the site frequency spectrum (SFS) for inference. I has already estimated the SFS prior for earlier analyses. However, on arrival in Bern, we discussed this and decided it would be most productive to go back to the original sequencing data and re-map to a newly available reference assembly and then re-generate the SFS from that. This has been quite time consuming, but should ultimately allow the data to be used for a number of additional analyses.

3) Description of the main results obtained

At present, due to the work not being completed yet, we do not have any results to report. However, we do have the analysis planned out and a good idea of which models to test, and should shortly have newly generated SFS to start the analysis.

4) Future collaboration with host institution (if applicable)

As we did not get all the work completed in the two-week time frame, I have stayed on an extra two weeks in Bern. The host institution have then offered to cover costs for me to return for a longer stay later this year to allow completion of this work and to complement it with investigations in to the accumulation of deleterious mutations during these demographic bottlenecks.

5) Projected publications / articles resulting or to result from the grant (*ESF must be acknowledged in publications resulting from the grantee's work in relation with the grant*)

It is anticipated that the work conducted during this Short Visit will contribute towards a publication in a high impact journal. We currently have one paper in review in Nature Communications, which we may add this work to depending upon the reviewer's comments. Otherwise, we will draft a new paper most likely targetting Molecular Ecology as our first choice journal.

6) Other comments (if any)

Apologies that this report is submitted later than anticipated in the original application. It has been difficult to schedule a time when both myself and the host were available. And, thank you for the opportunity to undertake this work, I believe it will be a major component of the genomics work on killer whale ecotypes.



Andy Foote <footead@gmail.com>

Aer Lingus Confirmation - Booking Ref: 28XVDN

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To: FOOTEAD@gmail.com

Fri, Jun 19, 2015 at 12:34 PM



Booking Confirmation



Booking Reference: **28XVDN**

Date: 19 June 2015

MR ANDREW FOOTE

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Your Flights

Passenger(s)
MR ANDREW FOOTE

Flight **EI0680 - Sun 09 Aug 2015**
Departs: Dublin-Terminal 2 (DUB) 06:50
Arrives: Geneva-Main Terminal (GVA) 10:00
Status: L/Economy Class **CONFIRMED**
Operated By: Aer Lingus
Seats: 27F
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0532480273663			19JUN
Details	Fare p.p.	Taxes & Charges	Total
1 Adult(s):	EUR 94.99	EUR 34.00	EUR 128.99
Total Amount			EUR 128.99
Admin Fee:			EUR 7.00
Checked Bag 15Kg Fee:			EUR 25.00
Economy Seat Fee:			EUR 5.99
TOTAL			EUR 166.98



Andy Foote <footead@gmail.com>

Aer Lingus Confirmation - Booking Ref: 2HQBDB

bookingsen@aerlingus.com <bookingsen@aerlingus.com>
 Reply-To: bookingsen@aerlingus.com
 To: FOOTEAD@gmail.com

Mon, Aug 31, 2015 at 11:27 AM



Booking Confirmation



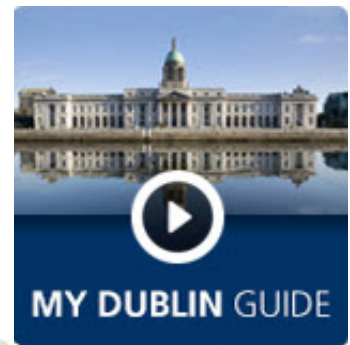
Booking Reference: **2HQBDB**

Date: 31 August 2015

MR ANDREW FOOTE

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Your Flights

Passenger(s)

MR ANDREW FOOTE

Flight

EI0345 - Sat 12 Sep 2015

Departs: Zurich (ZRH) 15:05
 Arrives: Dublin-Terminal 2 (DUB) 16:20
 Status: O/Economy Class **CONFIRMED**
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Ticket Numbers	Issue Date		
0532481486040	31AUG		
Details	Fare p.p.	Taxes & Charges	Total
1 Adult(s):	CHF 62.00	CHF 58.40	CHF 120.40
Total Amount			CHF 120.40
Admin Fee:			CHF 10.00
TOTAL			CHF 130.40

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