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EXHIBIT D TO THE PEER REVIEW COMMENTS OF MIAMI SEAQUARIUM

May 23, 2014

-----Original Message-----
From: "Malgorzata Pilot" <mpilot@lincoln.ac.uk>
Sent: Wednesday, February 26, 2014 5:27pm
To: "vetdept@msq.cc" <vetdept@msq.cc>
Subject: RE: 2010 Paper data J Evol.

Hi Magdalena,

Here are the answers to your questions:
1. The FS then in her row is the method determined not that they were full siblings correct? And the outcome under Cervus, Colony I and Colony II were undetermined correct? Also any particular reason she was compared to L79?
One analysis (using the program Kingroup) indicated that Lolita and L79 were full siblings, but other analyses did not confirm it, showing instead that these individuals are not closely related. As we explain in the paper, we can only rely on these kin associations that are confirmed by multiple analyses, because we used a relatively small number of loci, and the level of genetic variability within each killer whale ecotype is very low, which may sometimes lead to erroneous associations. In this particular case, we in fact have evidence that L79 and Lolita cannot be full sibs, because we identified a mother of L79, and we can exclude her as Lolita's mother, because their genotypes did not match. It is likely that L79 may be a distant relative of Lolita, but even if this is the case, it is not a sufficient evidence to assign Lolita to L pod, because of the possibility of mating between individuals from different pods.
We assessed kinship for every pair of individuals, so Lolita's genotype was compared with genotypes of all other individuals sampled. L79 was the only individual that was indicated as a putative kin, and that's why it is reported in the table.

2. I was wondering if on Table 3 Figure 1 where her little triangle is? Is it possible to obtain the graph with her little triangle highlighted?
I will find it out for you, but for this purpose I have to find the file with the data on this project - I moved this file to an external drive, so I have to find it and then I will check where Lolita is on this figure.

3. Also for putative mother and assigned mother by Cervus while there was 27 pairings, 11 of the pairings had a different mother. Is that correct? We deal with manatees and tursiops and find that intereting since they do adopt and lactate for other babies and tursiops also do steal babies from each other.
The cases where the putative mother inferred from behavioural observations was different than the mother assigned by Cervus concerned pairs where a subadult individual was associated with an adult female (i.e. where the first observation of such pair was made when the younger individual was already a subadult and not a calf). These cases cannot be considered as an evidence of adoptions or stealing calves.

4. Was her paternity In the L pod, the Southern pods, or elsewhere?
We were not able to determine paternity for Lolita.

5. I have been trying to get her sequences do you happen to have them or where I can obtain them? If it is genbank what would be the accession code.
I will check it for you. The paper Pilot et al. 2010 was based on data that were produced for another project and published before, so I did not submit any sequences to Genbank, but I will check the accession numbers, and I may also send you the sequence.

I am sorry that I have not replied to all your questions right now, but I am working at a university and I am very busy with teaching now. If any of my answers is unclear or insufficient, please don't hesitate to contact me and I will answer you as soon as I can.

Best regards,
Malgorzata

From: vetdept@msq.cc [vetdept@msq.cc]
Sent: 19 February 2014 13:47
To: Malgorzata Pilot
Subject: 2010 Paper data J Evol.

Hello, I am Magdalena Rodriguez the veterinarian at Miami Seaquarium. Our Orca Lolita was in your 2010 paper (LOL). Dr. Hoelzel forwarded me your email. I was updating and completing our Orca's records and would like to include some of this data. For the Southern residents (SR) he mentioned only 17 were sampled so most of the pod is not sampled. For her specific data I was looking at the supplemental information and he said that kinship was undetermined for her. Two questions: The FS then in her row is the method determined not that they were full siblings correct? And the outcome under Cervus, Colony I and Colony II were undetermined correct? Also any particular reason she was compared to L79? I was wondering if on Table 3 Figure 1 where her little triangle is? Is it possible to obtain the graph with her little triangle highlighted?
Also for putative mother and assigned mother by Cervus while there was 27 pairings, 11 of the pairings had a different mother. Is that correct? We deal with manatees and tursiops and find that intereting since they do adopt and lactate for other babies and tursiops also do steal babies from each other.
Thank you,
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