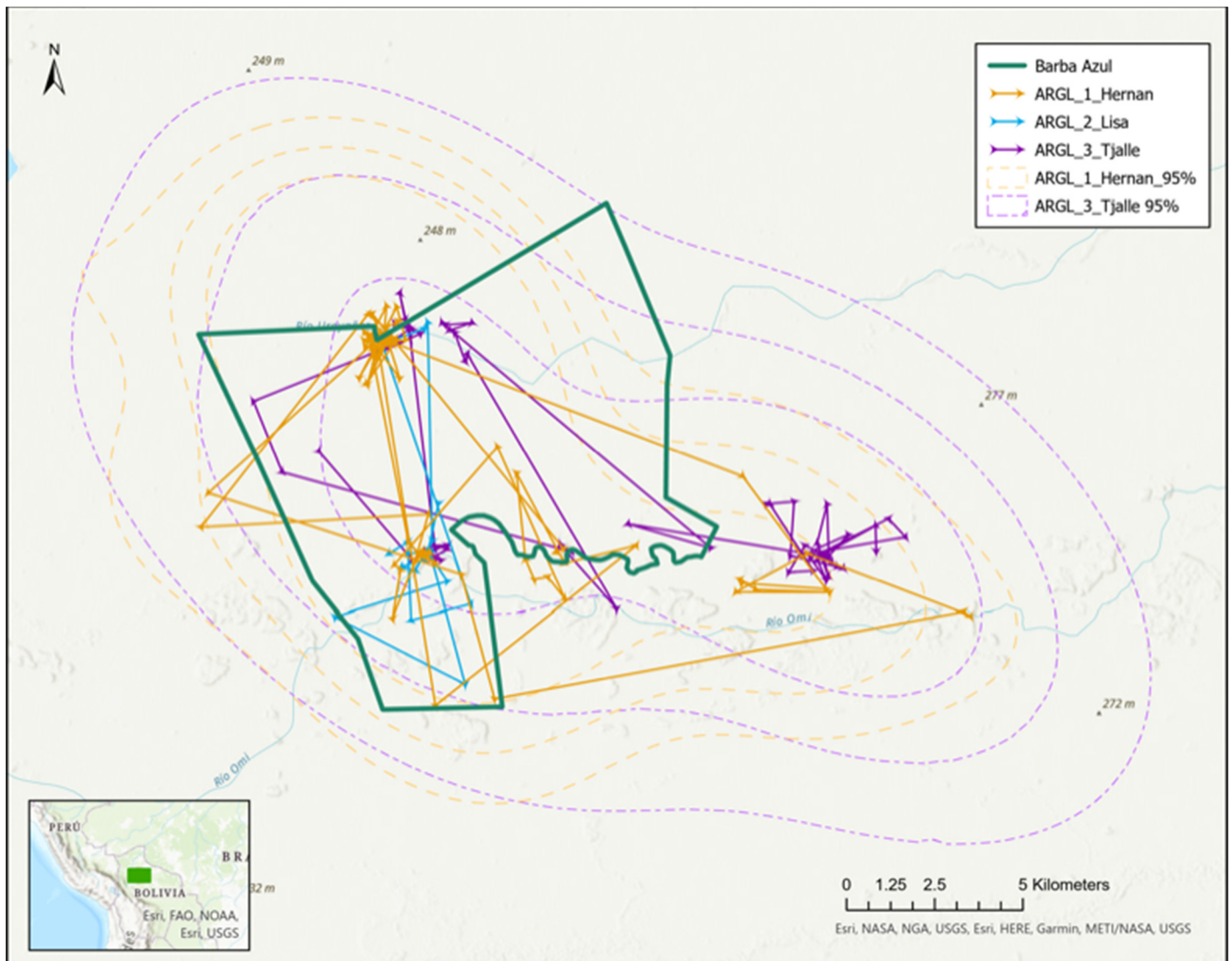


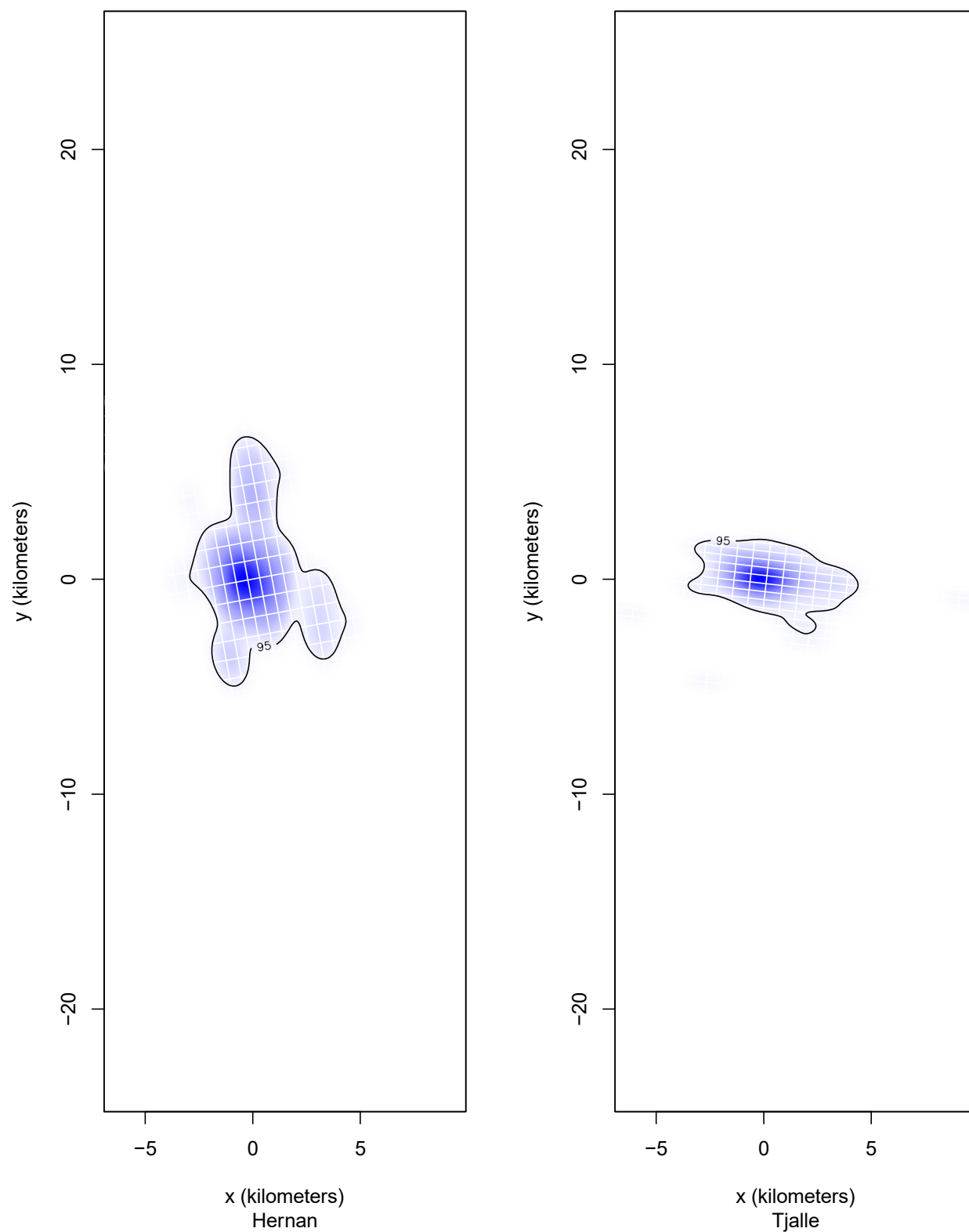
**Supplemental Table S1:** Argos Id’s and morphometric measures of captured wild Blue-throated Macaws from Barba Azul. Note Sexes were not determined.

	Date of Capture	Transmitter Argos ID	Wing (mm)	Tail (mm)	Culmen (mm)	Total Head (mm)	Tarsus (mm)	Body Mass (g)	Transmitter Weight (gm)	% of Body Mass
ARGL1	08_31_19	172540	354	469	51.7	53.2	30.7	700	31.3	4.5%
ARGL2	09_01_19	172140	331	435	46.6	45.5	31.0	670	30.9	4.6%
ARGL3	09_09_19	172139	360	496	51.4	48.5	30.9	840	32.1	3.8%
ARGL4	09_09_19	None	343	460	48.7	45.7	29.5	670		
Average			347	465.0	49.6	48.2	30.5	720		
± SD			12.8	25.2	2.4	3.6	0.7	81.2		

**Supplemental Figure S1:** Map of Barba Azul Nature Reserve, with tracks of 3 BTM;s and 95% Home Range Estimates for 2 BTM's (ARGL1 and ARGL3) with sufficient data for home range analyses. Nicknames of birds used within Movebank and "Animal Tracker" app are appended to codes. Created in ARCGIS Pro 2.7.



**Supplemental Figure S2:** Map of 95% Home Range Estimates for 2 BTMs (ARGL1\_Hernan on left and ARGL3\_Tjalle on right) on wet season (breeding season) sites. OU anisotropic Utilization Distribution in ARGL1\_Hernan and uncorrected KDE (IID) for ARGL3\_Tjalle, as chosen by AIC comparisons in "ctmm.select" procedure in R program "ctmm." Geographic locations redacted due to sensitivity of the data. Created in R Studio 1.4.1717.



Supplemental Video S1: Video of captive BTM tagged with an MTI dummy transmitter at Loro Parque, Tenerife, Spain. Video by L.C.D. (Link to video: [https://www.dropbox.com/s/11wkth82sm7qq8z/MTI\\_captive.MOV?dl=0](https://www.dropbox.com/s/11wkth82sm7qq8z/MTI_captive.MOV?dl=0)).

Supplemental Video S2: Video of release of a wild BTM with a Geotrak transmitter. Video by L.C.D. (Link to video: <https://www.dropbox.com/s/qhbl8eyrzw4ry64/Release.MOV?dl=0>).

Supplemental Video S3: Animation of 3 BTM movements around Barba Azul, using the R program "MoveVis." Data is interpolated to provide simultaneous estimates of locations at each step in the video. Video by L.C.D. (Link to video: [https://www.dropbox.com/s/vijiajos0afmxgu/Macaws\\_BANR\\_animation.gif?dl=0](https://www.dropbox.com/s/vijiajos0afmxgu/Macaws_BANR_animation.gif?dl=0)).