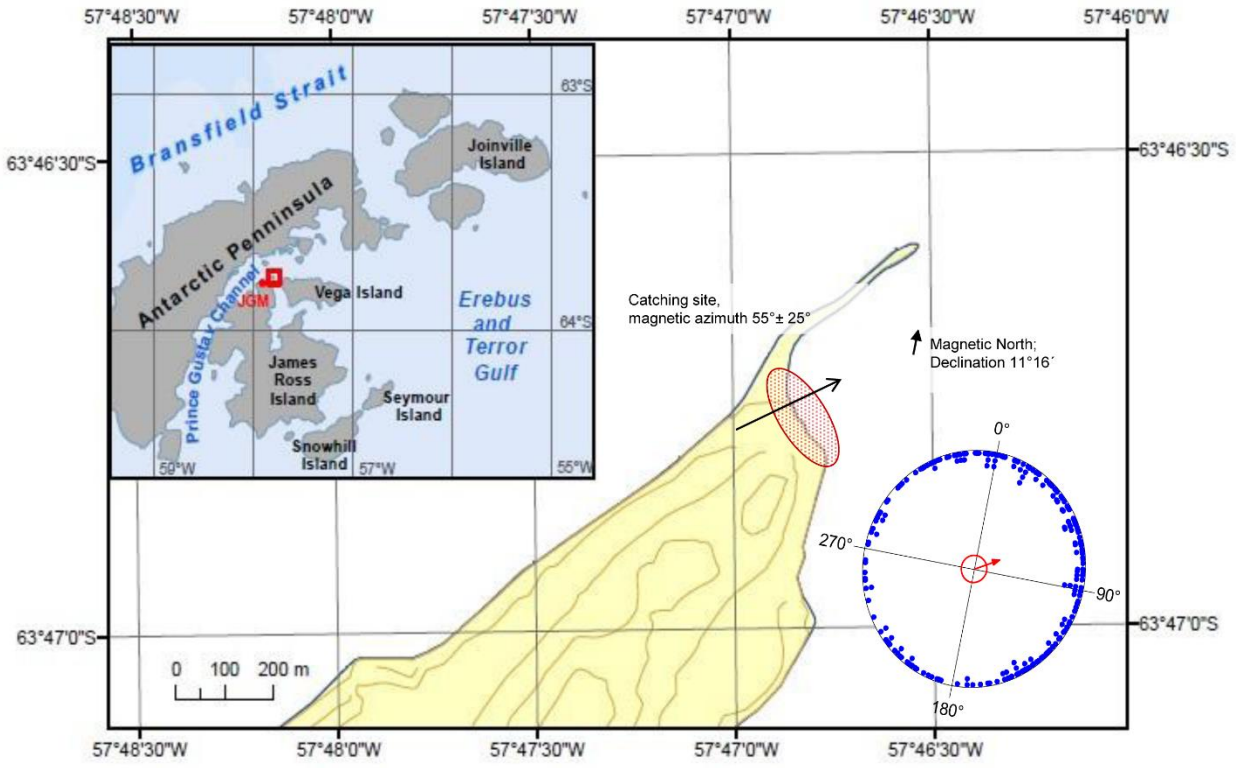
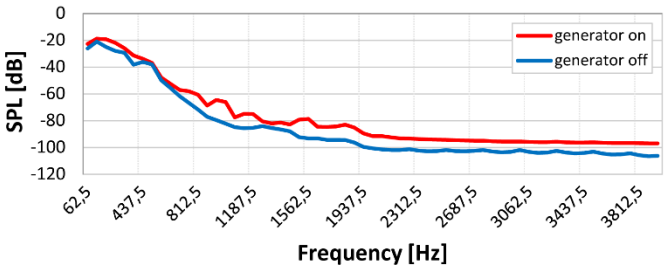


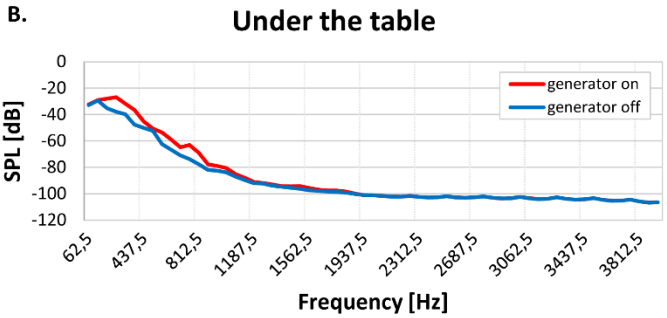
Fig. S1. Geographical location of catching beach and JGM station on James Ross Island. Magnetic azimuth of the Y-axis along the beach coastline varies from 30° to 80°. The average magnetic escape orientation of *Gondogeneia* in the laboratory (diagram on right, given also as Fig. 1E) corresponds very well with the average seaward magnetic bearing. Note that the tilt of circle diagram by 11°16’ reflects the local declination (difference between geographic and magnetic North).

Fig. S2. Laboratory in polar station and testing device. Set-up with white cloth shielding lifted for manipulation with animals (left). White tunnel pulled down for testing (right). Note position of white testing dish (shown with no water) and releasing funnel in the middle which can be lifted from above by a string. Illumination and camera from above, wooden Helmholtz coil on the floor, blue tank as animal store, table with PC and power supply behind also apparent.

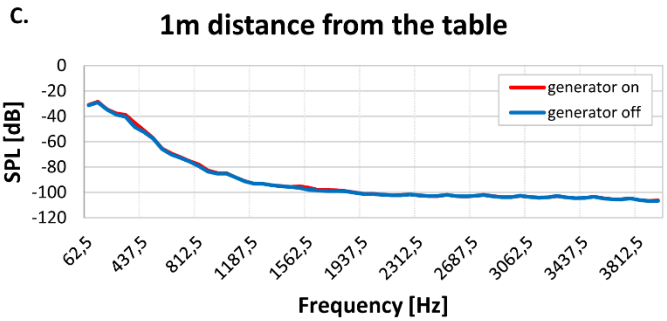
A.



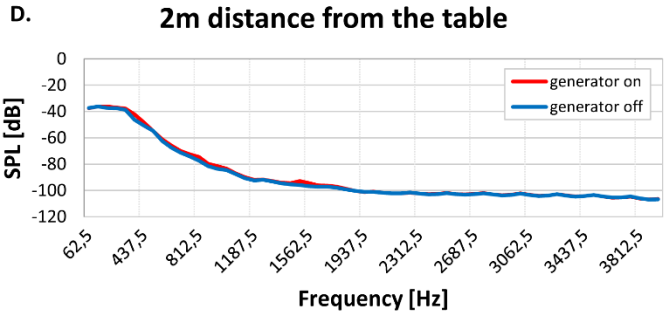
B.



C.



D.



E.

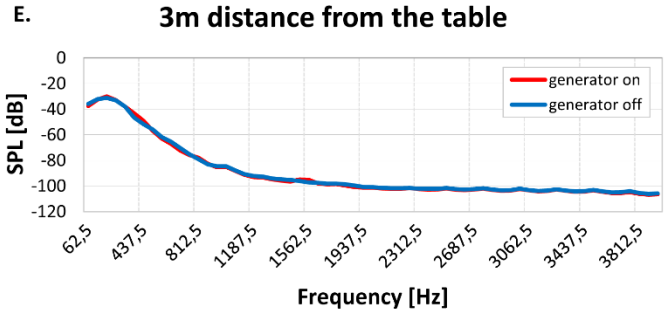


Fig. S3. Additional measurements of vibrations spread from RF generator at different posts and distances. Generator was placed on wooden table (same position and type as shown on Fig. S2) and vibrations were measured in five different distances. The probe was on the table by the generator (Fig. S3A), under the table on the chipboard floor (Fig. S3B) and 1-3 meters distant (Fig. S3 C-E). Note that while there is a difference between on and off states close to the generator, curves do not differ in the distance 1m and more.