**Age and sex-specific foraging movements and energetics in an endangered monomorphic seabird**

**Zanri Strydom1,5\*, David Grémillet2,3, Hervé Fritz1,4,5, Jan A. Venter1,5, Julien Collet*6*, Akiko Kato7, Lorien Pichegru8**

*1Department of Conservation Management, Faculty of Science, George Campus, Nelson Mandela University, Madiba Drive, George, 6531, South Africa*

*2Centre d'Ecologie Fonctionnelle et Evolutive (CEFE), UMR 5175 Univ Montpellier, CNRS, EPHE, IRD, Montpellier, France.*

*3Percy FitzPatrick Institute of African Ornithology, University of Cape Town, Cape Town, South Africa.*

*4Sustainability Research Unit, Nelson Mandela University, Madiba Drive, George, 6531, South Africa*

*5REHABS International Research Laboratory, CNRS-Université Lyon 1-Nelson Mandela University, George Campus, Madiba drive 6531, George, South Africa*

*6Marine Apex Predator Research Unit, Institute for Coastal and Marine Research and Department of Zoology, Nelson Mandela University, Gqeberha, South Africa*

*7[Centre d'Etudes Biologiques de Chizé](http://www.cebc.cnrs.fr/" \t "_blank" \o "http://www.cebc.cnrs.fr/), UMR 7372, CNRS – La Rochelle Université, 79360 Villiers-en-Bois, France*

*8Institute for Coastal and Marine Research, Nelson Mandela University, Gqeberha, South Africa*

*\*Corresponding author, e-mail:* [*zanri.nature@gmail.com*](mailto:zanri.nature@gmail.com)**Main text analysis (Table 2) code**

m<-glm(recaldurh~ ï..Age, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(distancelog10~ ï..Age, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(pathlog10~ ï..Age, family=gaussian, data=data)

anova(m, test="F")

summary(m)

**Main text analysis (Table 3) code**

m<-glm(recaleejhlog~ ï..Age + Sex + ï..Age:Sex, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(recalflyph~ ï..Age + Sex+ ï..Age:Sex, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(recalrestph~ ï..Age + Sex+ï..Age:Sex, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(recaltakephlog~ Sex, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(recaldivephlog~ Sex, family=gaussian, data=data)

anova(m, test="F")

summary(m)

**Supplementary material (Table S1) code**

m<-glm(recaldurh~ ï..Age\*Year.name, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(distancelog10~ ï..Age\*Year.name, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(pathlog10~ ï..Age\*Year.name, family=gaussian, data=data)

anova(m, test="F")

summary(m)

m<-glm(recaleejhlog~ ï..Age\*Year.name, family=gaussian, data=data)

anova(m, test="F")

summary(m)

**Main text Figure 4 code**

m1<-glm(recaleejhlog~ ï..Age, family=gaussian, data=data)

anova(m1, test="F")

summary(m1)

plot(ggeffects::ggpredict(m1, terms = c("ï..Age")), colors = c("#009E73","#56B4E9"))+ theme(panel.grid=element\_blank())

m2<-glm(recalflyph~ ï..Age, family=gaussian, data=data)

anova(m2, test="F")

summary(m2)

plot(ggeffects::ggpredict(m2, terms = c("ï..Age")), colors = c("#009E73","#56B4E9"))+ theme(panel.grid=element\_blank())

m3<-glm(recalrestph~ ï..Age, family=gaussian, data=data)

anova(m3, test="F")

summary(m3)

plot(ggeffects::ggpredict(m3, terms = c("ï..Age")), colors = c("#009E73","#56B4E9"))+ theme(panel.grid=element\_blank())

**Main text Figure 6 code**

boxplot(data$recaldivephlog~data$Sex, las=2,cex=0.6)

boxplot(data$recaltakephlog~data$Sex, las=2,cex=0.6)