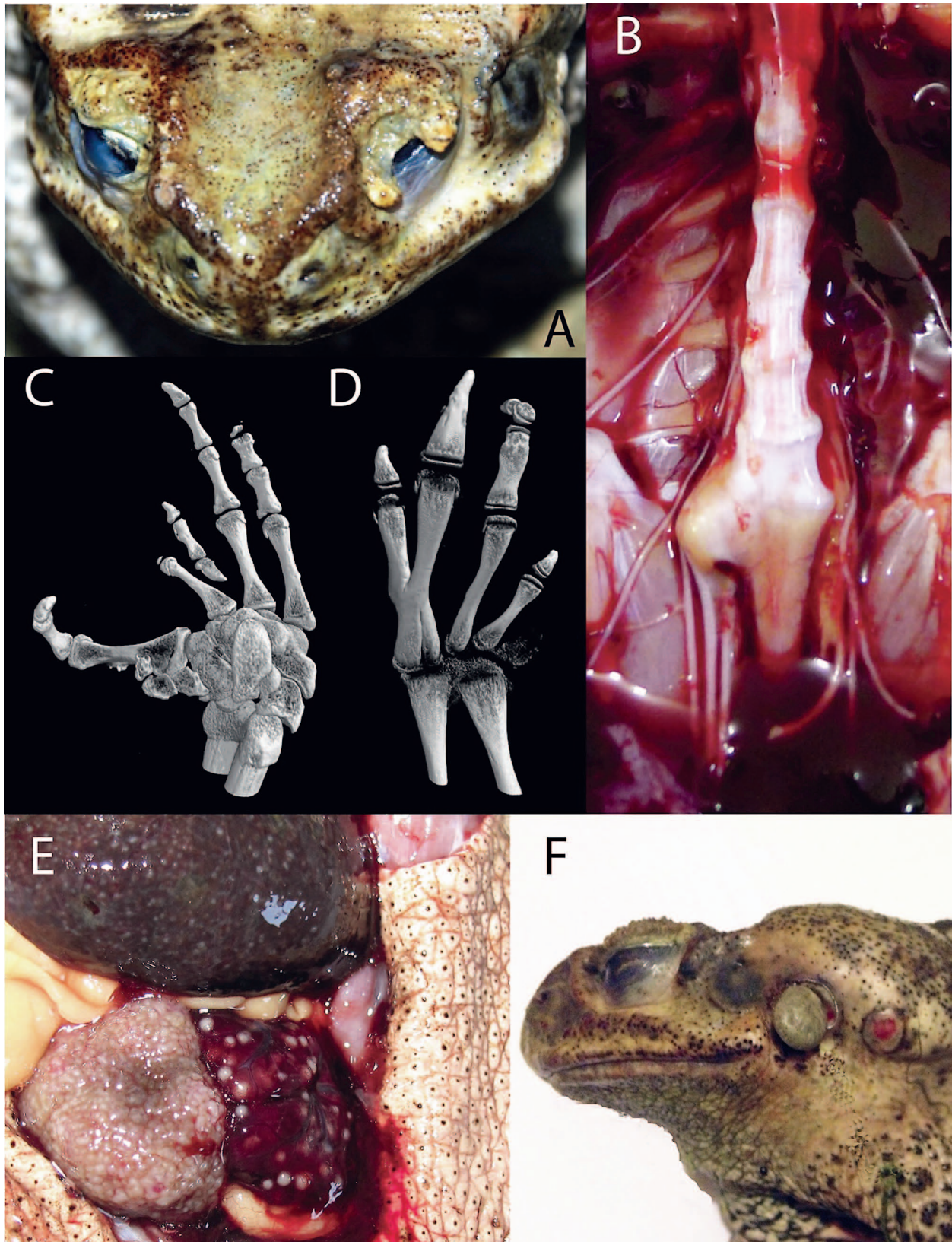


Supplementary Figure S1. Examples of abnormalities recorded in *Rhinella diptycha* from Fernando de Noronha: Abnormal eyelid (A); lateral marginal osteophytes in the urostyle (B); dislodged finger (C); and syndactyly with phalanges crossed (D).



Supplementary Table S1. Anomalies in toads recorded from Bermuda and Fernando de Noronha, including reclassifications of the types of deformity.

Anomaly	Bermuda	Fernando de Noronha	Original classification
Forelimbs			
Polymelia (extra limb)	x		
Polydactyly, polyphalangy, forked digits	x	x	
Amelia (missing limb)	x		
Phocomelia (proximal bone missing but distal bones present)	x		Definition updated according HENLE et al. (2017)
Hemimelia (partially missing limb)	x	x	ectromelia of humerus or radio-ulna in TOLEDO & RIBEIRO (2009)
Ectrodactyly (missing digits)	x	x	
Brachydactyly (shortened digits)	x	x	
Ectro- and brachydactyly combined	x	x	
Syndactyly (fused digits)	x	x	
Other digital anomalies	x		
Bent or deformed wrist or arm	x		
Part of limb trapped under skin	x		
Elbow and/or forearm enlarged	x	x	Hypertrophy in TOLEDO & RIBEIRO (2009)
Hindlimbs			
Polydactyly, polyphalangy, forked digits	x	x	
Amelia (missing limb)	x		
Phocomelia (complete but malformed limb)	x		
Hemimelia (partially missing limb)	x	x	Ectromelia of tibia and fibula in TOLEDO & RIBEIRO (2009)
Ectrodactyly (missing digits)	x	x	
Brachydactyly (shortened digits)	x	x	
Ectro- and brachydactyly combined	x	x	
Syndactyly (fused digits)	x	x	
Other digital anomalies	x		
Bent or malformed ankle	x		
Skin webbing (cutaneous fusion)	x	x	
Permanently extended or twisted leg/foot	x		
Large finger tip		x	
Eye-related			
Bilateral anophthalmia (missing both eyes)		x	
Unilateral anophthalmia (missing one eye)	x	x	
Malpositioned eye	x		
Microphthalmia (diminished eye)	x	x	
Bulging eye, greatly diminished iris	x		
Malpositioned iris	x	x	Misplaced pupil in BACON et al. (2006)
Malformed/enlarged iris	x		Malformed/enlarged pupil in BACON et al. (2006)
Abnormally small iris(es)	x		Abnormally small pupil(s) in BACON et al. (2006)
Iris absent	x	x	Pupil absent in BACON et al. (2006)
Dark brown or missing iris(es)	x	x	
Misplaced lens	x		
Abnormal eye socket	x		
Missing eyelid	x	x	Missing eye ‘pad’ from BACON et al. (2006); Palpebra absent in TOLEDO & RIBEIRO (2009)
Eyelid fused to skin		x	Palpebra fused to skin in TOLEDO & RIBEIRO (2009)
Nictitant membrane fused to the superior palpebrae		x	

Supplementary Table S1 continued

Anomaly	Bermuda	Fernando de Noronha	Original classification
Concave Iris		x	
Cataract		x	
Other cephalic			
Microcephaly (head small, nose blunt; shortened upper jaw)		x	
Mandibular hypoplasia (lower jaw abnormally short)		x	
Tympanum deformed (irregular shape)		x	
Mandibular dysplasia (malformed jaw)	x		
Malformed snout	x		
Parotoid gland reduced to half of normal size		x	
Nostril skin absence		x	
Brachycephaly		x	
Axial			
Scoliosis	x		
Abnormal pelvis	x		
Deformed urostyle		x	
Lateral marginal osteophytes in urostyle		x	
Coloration			
Leucism		x	Partial albinism in TOLEDO & RIBEIRO (2009)
Based on	BACON et al. (2006) / Present study	TOLEDO & RIBEIRO (2009) / Present study	

Supplementary Table S2. Frequency and mean prevalence (in percentage) of anomalies in post-metamorphic individuals of *Rhinella marina* (Bermuda and Hawai'i), *R. jimi*, and *R. ornata* (Brazil). Data extracted from BACON et al. (2006), TOLEDO & RIBEIRO (2009), BESSA-SILVA et al. (2016), REBOUÇAS et al. (2019), and present study (in bold). * Not used for the prevalence estimation as all toads were sampled in only one pond. If this value were included, the mean prevalence would be 50.2%.

Year	Hawai'i	Bermuda	Fernando de Noronha	Propriá	Itamaracá	Brazil			Mangaratiba	Seropédica	Ilha de Bailique
						Ilha Grande	Ilha da Marambaia	Ilha de Itacuruçá			
1982	0										
2000		19.1									
2001		26.4									
2002		30.1									
2003		27.9									
2004		30.2									
2005		28.6									
2008			58.8	10.5	3.7						
2009			40.5								
2014			37.8								
2015	4.7		52.3								
2016		36.3									33
2019			61.4*			33.3	20.3	15.4	15.4	12.5	
Mean prevalence	2.4	28.4	47.4								

Supplementary Table S3. All possible logistic GLMs including the three explanatory variables, without their one-level interactions, on the proportion of deformities across our 11 sampling sites. AIC rankings highlight the importance of anthropogenic habitat disturbance as a key explanatory variable of deformities.

Variables			AICc	Delta AICc
Anthropogenic habitat disturbance	SVL	Sex	75.692	0
Anthropogenic habitat disturbance	Sex		75.786	0.094
Anthropogenic habitat disturbance			77.588	1.896
Anthropogenic habitat disturbance	SVL		79.685	3.993
SVL	Sex		94.339	18.647
Sex			102.709	27.017
SVL			114.378	38.686

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