

Supplementary Materials Table S2. POPAN estimators.

POPAN Tested Models

Phi (t) p (t) pent (t) N	
Phi (.) p (t) pent (t) N	
Phi (t) p (.) pent (t) N	
Phi (t) p (.) pent (.) N	

Temporal Intervals

Encounter	Time (in days)	Date
T1	0	18/04/2018
T2	21	09/05/2018
T3	35	13/06/2018
T4	7	20/06/2018
T5	7	27/06/2018
T6	7	04/07/2018
T7	7	11/07/2018
T8	7	18/07/2018
T9	133	28/11/2018
T10	11	09/12/2018
T11	10	19/12/2018
T12	112	10/04/2019
T13	42	22/05/2019
T14	14	05/06/2019
T15	27	02/07/2019
T16	359	25/06/2020
T17	6	01/07/2020
T18	7	08/07/2020
T19	7	15/07/2020
T20	83	06/10/2020

Model Selection

MODEL	QAIC	NUMPAR	DEVIANCE	M2LOGL	QBIC
Check Par. Cnt. {Phi (t) p (t) pent (t) N}	458.7830	42.00000	-154.8803000	314.5830	509.2416
Check Par. Cnt. {Phi (.) p (t) pent (t) N}	381.1316	23.00000	-148.3064200	321.1569	427.7556
{Phi (t) p (.) pent (t) N}	416.3263	26.00000	-123.6107000	345.8526	466.3556
{Phi (t) p (.) pent (.) N}	8639.5359	20.00000	8119.8287000	8589.2920	8681.9866

Estimated population size for all study period.

N*-hat = 142.8482; Std = 22.0699; 95% Confidence Interval: Lower = 105.7151 Upper = 193.0245

Survival (ϕ); ϕ = 0.9984; Std = 0.6385E-03; 95% Confidence Interval: Lower = 0.9965; Upper = 0.9993

Pent (probability of entering the population between two consecutive time intervals)

The probability of population entry between two consecutive time intervals (Newt Birth + Immigration Estimates) is generally negligible (<0.00001 individuals x time period).