

**Table 1.** Observed von Bertalanffy growth parameters used to analyze CYPR14.

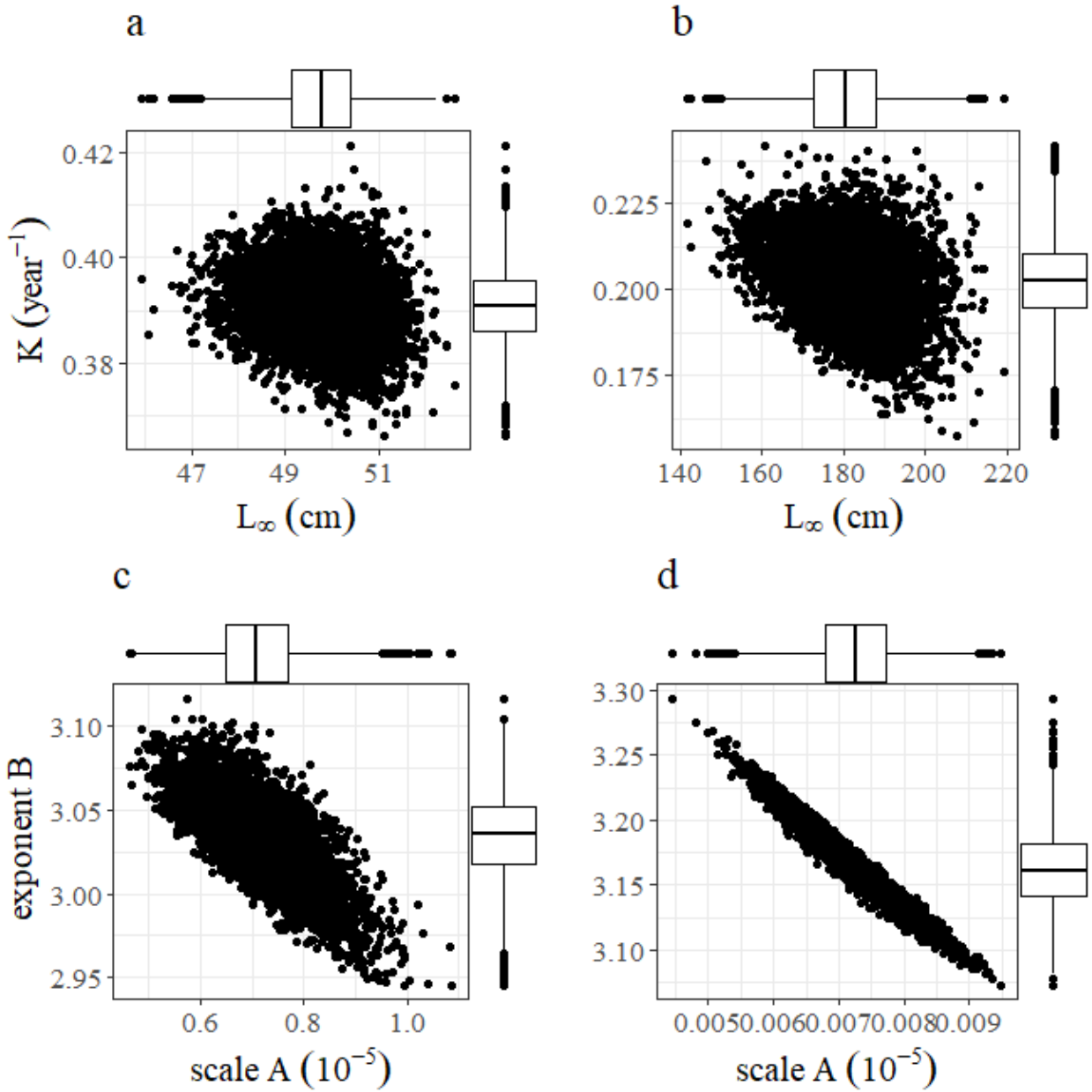
<i>L. stappersii</i> in Lake Tanganyika			<i>L. niloticus</i> in Lake Victoria		
$L_{\infty}$ (cm)	$K$ (year <sup>-1</sup> )	Source <sup>1</sup>	$L_{\infty}$ (cm)	$K$ (year <sup>-1</sup> )	Source <sup>1</sup>
40.7	0.398	1	251	0.091	1
45	0.4	1	205	0.19	1, 3
47	0.4	1	185	0.17	1
47.9	0.39	1	124	0.22	1
48	0.39	1	122	0.26	1
48	0.38	1	169	0.18	3
50.6	0.43	1	256	0.29	3
51	0.35	1	216	0.19	3
52.4	0.4	1	204	0.21	3
53	0.4	1	221	0.17	3
53.5	0.355	1	178	0.2	3
55	0.36	1	153	0.24	3
51	0.35	2	145	0.24	3
51.9	0.44	2	122	0.22	3
51	0.42	2	160	0.17	4

<sup>1</sup> [www.fishbase.org](http://www.fishbase.org), <sup>2</sup> Mannini (1998), <sup>3</sup> Yongo et al. (2018), <sup>4</sup> Nkalubo (2012).

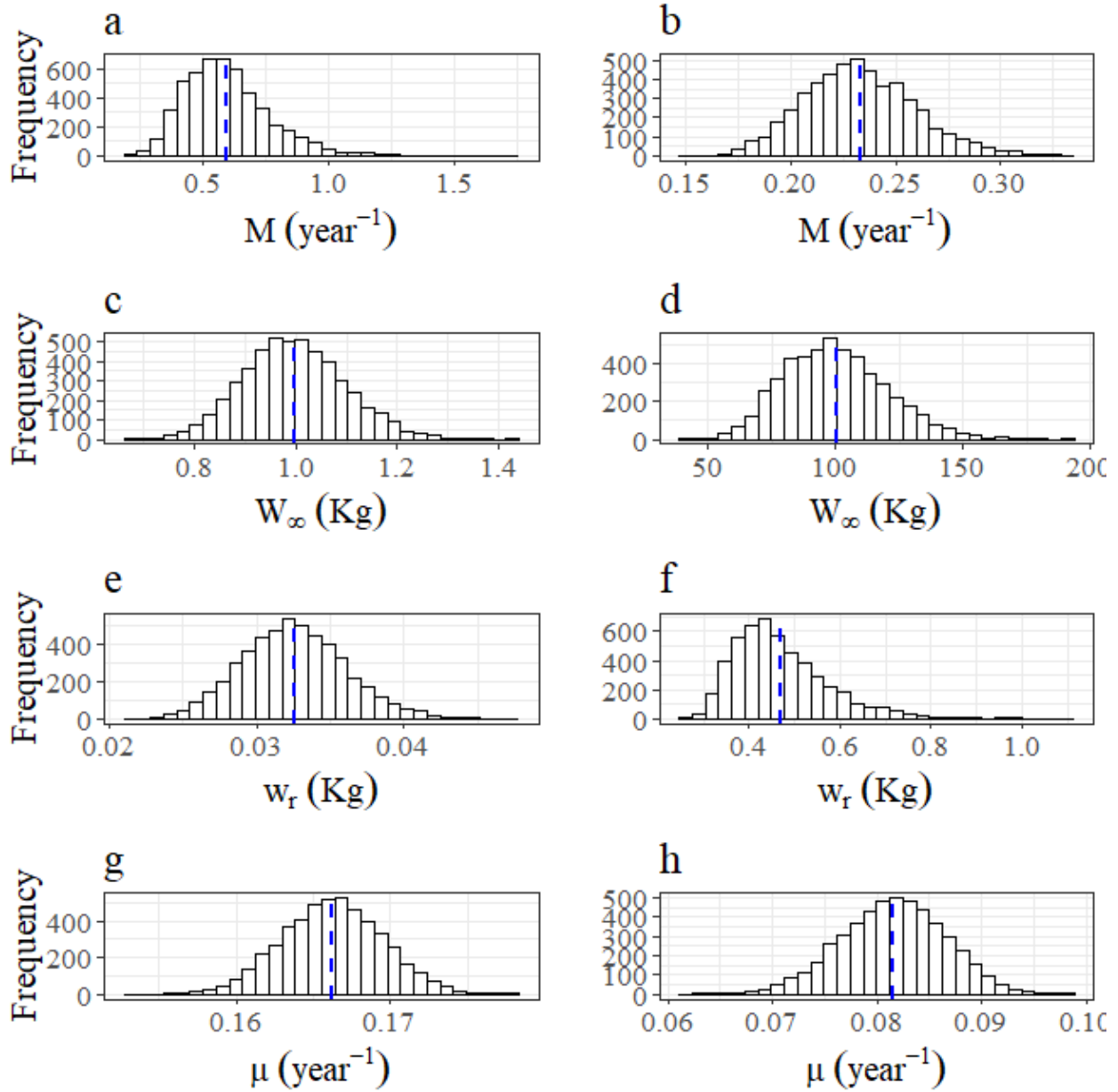
**Table 2.** Observed weight–length scales (*A*) and exponents (*B*) used to analyze CYPR14 for *L. stappersii* in Lake Tanganyika (lengths were in mm and weight in g) and *L. niloticus* in Lake Victoria (lengths were in cm and weight in g).

<i>L. stappersii</i>			<i>L. niloticus</i>		
<i>A</i> ( $\times 10^{-5}$ )	<i>B</i>	Source <sup>1</sup>	<i>A</i> ( $\times 10^{-2}$ )	<i>B</i>	Source <sup>1</sup>
1.4	2.84	1	0.78	3.12	1
0.814	2.95	1	0.823	3.123	1
0.91	3	1	0.951	3.089	1
0.612	3.03	1	0.66	3.155	1
0.4897	3.09	1	1.04	3.041	2
0.48	3.05	1	0.51	3.26	2
0.9875	3.08	1	0.62	3.22	2
0.3175	3.14	1	0.35	3.34	2
0.468	3.05	1	0.79	3.12	2
0.6798	2.99	1			
0.68	3.15	1			

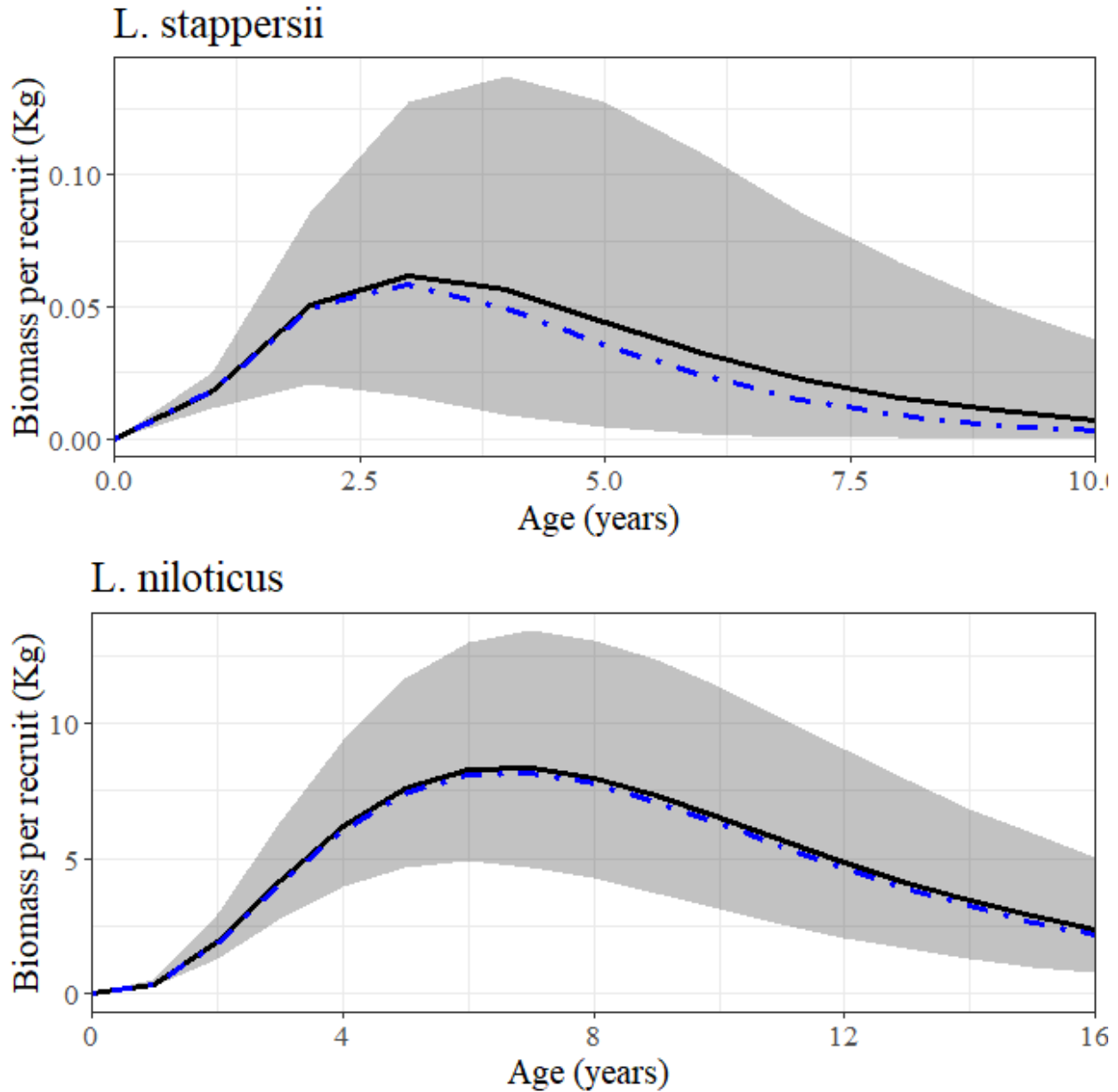
<sup>1</sup> [www.fishbase.org](http://www.fishbase.org), <sup>2</sup> Yongo et al. (2017).



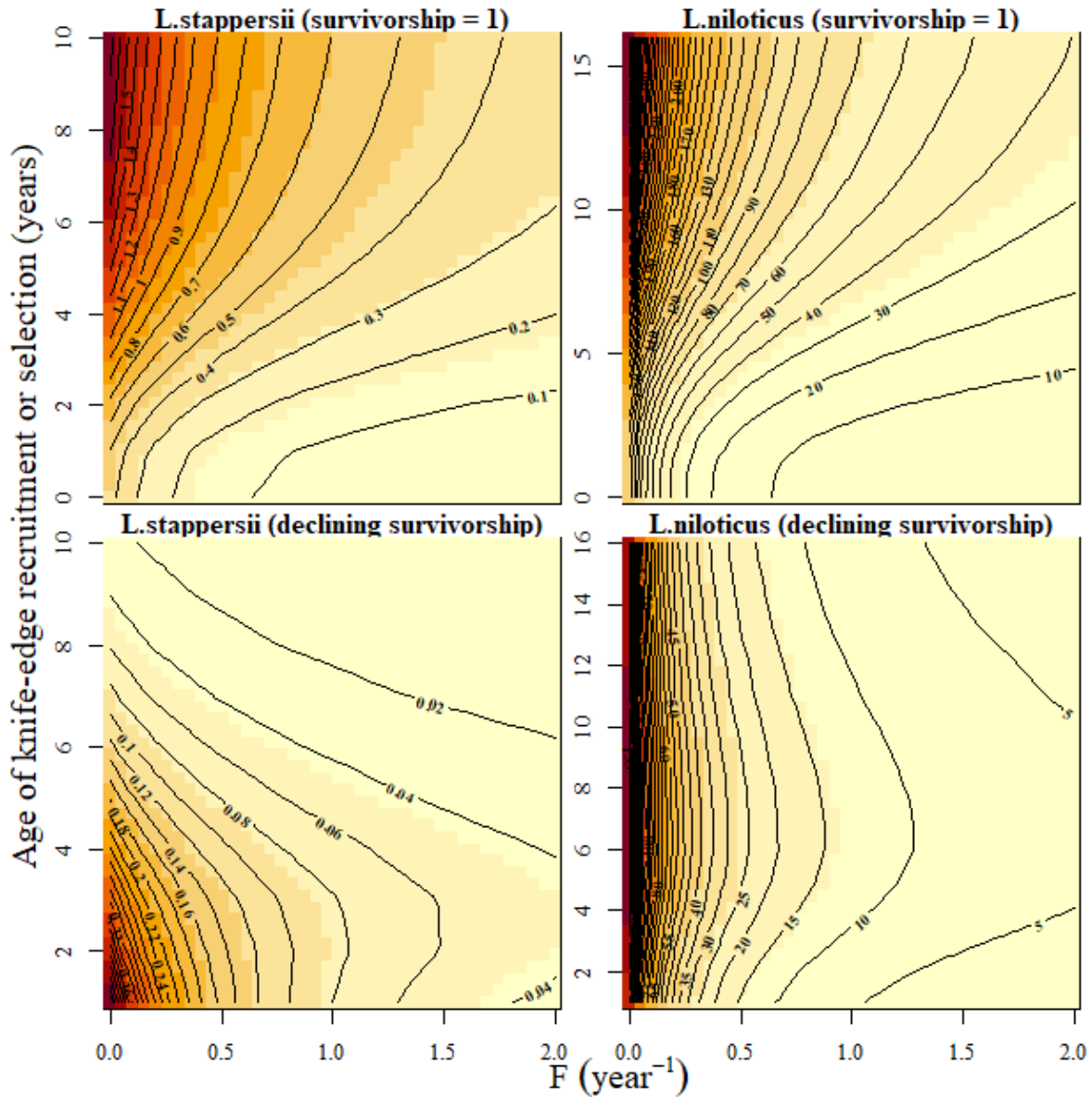
**Fig. 1.** Scatter plots and marginal boxplot distributions of the random draws of (a) and (b) the von Bertalanffy growth parameters and (c) and (d) weight–length scales and exponents for *L. stappersii* in Lake Tanganyika (left panels) and *L. niloticus* in Lake Victoria (right panels).



**Fig. 2.** Frequency distributions of (a) and (b) natural mortality ( $M$ ), (c) and (d) asymptotic weight ( $W_\infty$ ), (e) and (f) mass of the average recruit ( $w_r$ ), and (g) and (h) the rate of metabolic loss of body mass ( $\mu$ ) for *L. stappersii* in Lake Tanganyika (left panels) and *L. niloticus* in Lake Victoria (right panels). The dashed blue line represents the mean of the distribution.



**Fig. 3.** Variations, against age, of mean (black solid line), median (blue dash-dotted line), and the 95% uncertainty envelopes (gray area) of biomass for an unfished cohort of *L. stappersii* in Lake Tanganyika and *L. niloticus* in Lake Victoria. The age-specific biomass  $B_a$  was given by  $B_a = l_a w_a$ , where  $w_a$  (kg) is mean weight at age  $a$  and  $l_a$  is the survivorship to age  $a$ :  $l_a = 1$  if  $a = 0$  year and  $l_a = l_{a-1} \exp(-M) = \exp(-aM)$  if  $a > 0$ ;  $M$  is natural mortality. Mean biomass, median biomass, the 95% lower biomass limit, and the 95% upper biomass limit of *L. stappersii* peaked at ages 3, 3, 2, and 4 years. Such summaries statistics for *L. niloticus* peaked at ages 7, 7, 6, and 7 years.



**Fig. 4.** Isopleths of the mean composite spawning-stock per recruit (CSSR) as a function of fishing mortality ( $F$ ) and the age of knife-edge recruitment or the age of knife-edge selection  $r$  for *L. stappersii* in Lake Tanganyika (left panels) and *L. niloticus* in Lake Victoria (right panels). The CSSR of the top plots was calculated considering that the survivorship to each age  $r$  is 1 (Eq. (1, Table 2)) and the CSSR of the bottom plots involved the declining survivorship to each age  $r$  (Eq. (5, Table 2)).

## References

- Mannini P. 1998. Ecology of the Pelagic Fish Resources of Lake Tanganyika. Ph.D. thesis, the University of Hull, Hull, U.K, 210 p.
- Nkalubo WN. 2012. Life History traits and growth of Nile perch, *Lates niloticus* (L), in Lake Victoria, Uganda: Implications for management of the fishery. PhD thesis, Makerere University, Kampala, Uganda.
- Yongo E, Outa N, Kito K, Matsushita Y. 2017. Some aspects of the biology of Nile perch, *Lates niloticus*, in the open waters of Lake Victoria, Kenya. *Lakes Reserv Res Manage* 20: 1–6.
- Yongo E, Agembe S, Outa N, Owili M. 2018. Growth, mortality and recruitment of Nile perch (*Lates niloticus*) in Lake Victoria, Kenya. *Lakes Reserv Res Manage* 23: 17–23.