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NEWSLETTER OF

# THE INTERNATIONAL BORNEAN FROG RACE

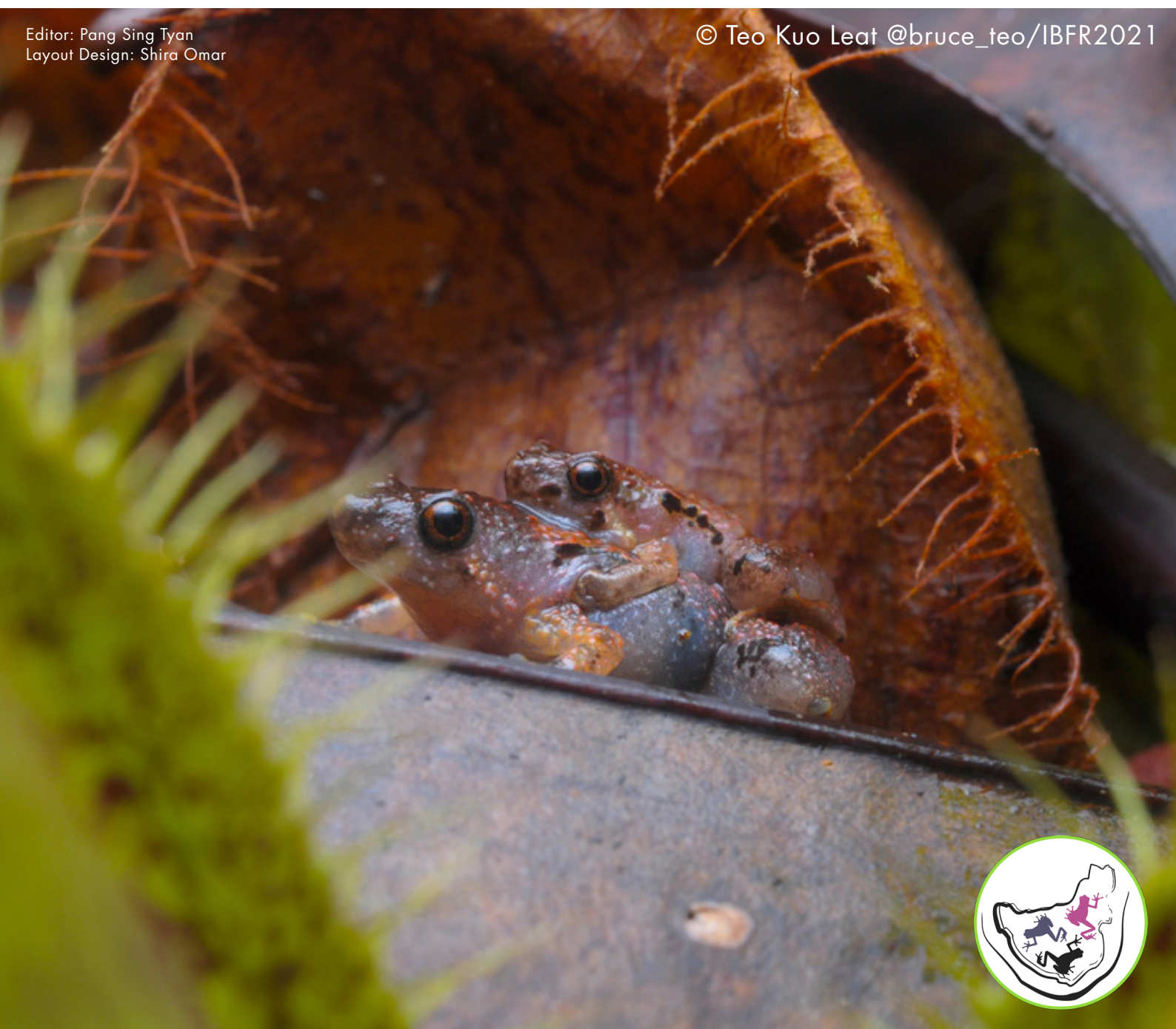
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ISSUE 4

1 DECEMBER 2021

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Layout Design: Shira Omar

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### INTRODUCTION

Here we are, at the end of the Race. Bitter sweet indeed. Bitter- It's been tough for our Panel of Judges, going through a large number of observations that have been submitted within the last 19 days. Especially on the last day of the Race, as shown in the graph below, the number of submissions hiked drastically, indicating the participants are giving their all for the Race. Sweet- The quality of images has been raised to another level!

Congratulations to all participants who fought to the end. Regardless of the results, all of you are champions! Bravo and Well Done to the Winners, for their outstanding images for Best Photo and for Most Number of Species observed during Month 3 of the Race.

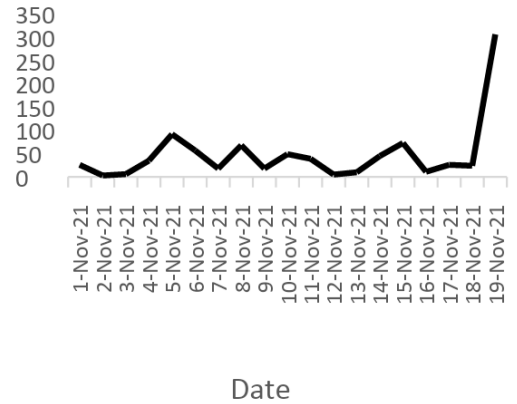


Figure 1: Daily submissions of observations by participants on iNaturalist.

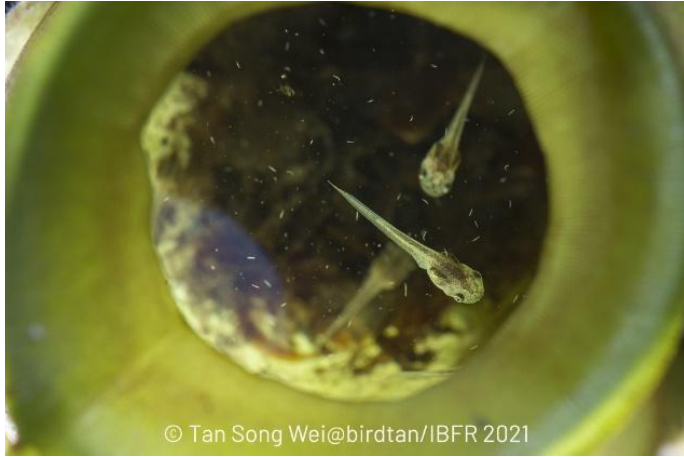
### BEST PHOTOS OF THE MONTH

We proudly present the Five Winning Monthly Images. Congratulations to the respective photographers!



### HONOURABLE MENTIONS

The following images received honourable mention by our panel of judges. Notes from the judges: these photos nearly made the cut and are also deemed exceptional for their portrayal of Bornean amphibians. Participants are reminded of the criteria such as sharpness, exposure, colour balance which have always been the judges' primary consideration.



## THE LEAGUE TABLE

The League Table below shows total species observed by each participant. Congratulations to those who made it to the Top 5 in Month 3 of the Race and the winners of the category "The Most Number of Species" for the month of November 2021. The ranking of the accumulated number of species observed by the participants since September 2021 is in Table 2.

Table 1: Top 5 winners of the category "The Most Number of Species" of the Race in November 2021

RANK	NAME	USER	Sp.
1	Palumie Imbun	palumie	46
2	Pylon Imbun	pylon	33
3	Mohd Faizizan Bin Borhan	zizan	31
4	Rostam Bin Atem	rostamachong	25
5	Chun Xing Wong	chunxingwong	23

Table 2: The rankings for the category "The Most Number of Species".

RANK	NAME	USER	Sp.
1	Wong Chun Xing	chunxingwong	61
2	Mohamad Affirul Faim bin Abdul Rahim	faim1306	56
3	Mohd Hafiz bin Ali	hafiz_	56
4	Bob Zakaria	bobzakaria	55
5	Teo Kuo Leat	bruce_teo	53
6	Mohd Faizizan Borhan	zizann	52
7	Samantha Barnes	samantha-barnes	51
8	Palumie Eliss Imbun	palumie	51
9	Tan Song Wei	birdtan	45
10	Pylon Dale Imbun	pylon	45
11	Dominic Kelundek	dominickay	45
12	Rostam bin Atem	rostamachong	42
13	Ak Mohd Shahrin Nizam bin Haisron	ak_shahnizam	23
14	Ng Jia Jie	ngjjajie	21
15	Masliadi Asri	adiyy92	20
16	Sim Shia Ying	julianna-sim	18
17	Jason Teo	jasonteo	17
18	Zainudin bin Akar	zainudin	16
19	Roger Teo	rogeteo	10
20	Trevor Allen Nyaseng	burekkemundang	7
21	Jonathan Anderson	tanerdy93	6
22	Adi Shabrani	adishabrani	5
23	Royston Stephen	royston25	5
24	Umar Fadhli Kennedy	fhadlikennedi	5
25	Yulinda Wahyuni Eddyutowo	yulindawahyunie	3
26	Bettycopa Amit	bettycopa	3
27	Tarien Kasi	tarien	2
28	Chan Swee Kim	srwkim	2
29	Mohammad Aliyuddin Jaini	ali_gullu	1
30	Penny Guang	pennyguang	1
31	Hashim Mahrin	bani_hasyim__	1
32	Racheal Rosedy	rachealrosedy	1
33	Veronica Leah Buma	vleahchambers	1

Sp: Species

A friendly note to all: Any participant who is awarded a 'Most Number of Species' monthly prize is still eligible to win a prize in the following month(s). However, all species that were counted towards their first prize cannot be counted again for the subsequent month(s).

Despite the Race Period in Month 3 being only 19 days, the shortest, the number of observed species were the highest among all three months. An additional 16 species were observed in month November, making in the total number of observed species in the Race, 105.

Table 3: The list of species observed during the 80 days of the Race.

NO	SPECIES NAME	RACE PERIOD			NO	SPECIES NAME	RACE PERIOD		
		SEPT	OCT	NOV			SEPT	OCT	NOV
1	<i>Ansonia hanitschi</i>	/		/	54	<i>Kaloula pulchra</i>	/	/	/
2	<i>Ansonia leptopus</i>	/	/	/	55	<i>Metaphrynella sundana</i>	/	/	/
3	<i>Ansonia minuta</i>	/	/	/	56	<i>Microhyla berdmorei</i>	/	/	/
4	<i>Ansonia spinulifer</i>	/	/	/	57	<i>Microhyla malang</i>	/	/	/
5	<i>Ansonia longidigita</i>			/	58	<i>Microhyla nepenthicola</i>	/	/	/
6	<i>Duttaphrynus melanostictus</i>	/	/	/	59	<i>Nanohyla perparva</i>			/
7	<i>Ingerophrynus divergens</i>	/	/	/	60	<i>Odorrana hosii</i>	/	/	/
8	<i>Ingerophrynus quadriporcatus</i>	/		/	61	<i>Abavorana luctuosa</i>	/	/	/
9	<i>Pelophryne guentheri</i>	/			62	<i>Chalcorana megalonesa</i>	/	/	/
10	<i>Pelophryne misera</i>			/	63	<i>Chalcorana raniceps</i>	/	/	/
11	<i>Pelophryne signata</i>	/	/	/	64	<i>Huia cavitympanum</i>	/	/	/
12	<i>Phrynomantis juxtasper</i>			/	65	<i>Hylarana erythraea</i>	/	/	/
13	<i>Phrynomantis juxtasper</i>	/	/	/	66	<i>Indosylvirana nicobariensis</i>	/	/	/
14	<i>Rentapia hosii</i>	/	/	/	67	<i>Meristogenys dyscritus</i>	/		/
15	<i>Fejervarya cancrivora</i>	/	/	/	68	<i>Meristogenys jerboa</i>	/	/	/
16	<i>Fejervarya limnocharis</i>	/	/	/	69	<i>Meristogenys kinabaluensis</i>	/	/	/
17	<i>Hoplobatrachus rugulosus</i>	/	/	/	70	<i>Meristogenys maryatiae</i>			/
18	<i>Limnonectes cintang</i>		/		71	<i>Meristogenys orphnocnemis</i>	/	/	/
19	<i>Limnonectes conspicillatus</i>	/	/	/	72	<i>Meristogenys whiteheadi</i>			/
20	<i>Limnonectes finchi</i>	/	/	/	73	<i>Pulchrana baramica</i>	/	/	/
21	<i>Limnonectes hikidai</i>	/	/	/	74	<i>Pulchrana laterimaculata</i>	/	/	/
22	<i>Limnonectes ingeri</i>		/	/	75	<i>Pulchrana picturata</i>	/	/	/
23	<i>Limnonectes kong</i>	/	/	/	76	<i>Pulchrana signata</i>	/	/	/
24	<i>Limnonectes kuhlii</i>	/	/	/	77	<i>Staurois guttatus</i>	/	/	/
25	<i>Limnonectes leporinus</i>	/	/	/	78	<i>Staurois latopalmatus</i>	/	/	/
26	<i>Limnonectes malesianus</i>	/	/	/	79	<i>Staurois tuberilinguis</i>	/	/	/
27	<i>Limnonectes palavanensis</i>	/	/	/	80	<i>Feihyla kajau</i>	/	/	/
28	<i>Limnonectes paramacrodon</i>	/	/	/	81	<i>Kurixalus chaseni</i>	/	/	/
29	<i>Occidozyga baluensis</i>		/	/	82	<i>Leptomantis angulirostris</i>	/	/	/
30	<i>Occidozyga laevis</i>	/	/	/	83	<i>Leptomantis cyanopunctatus</i>			/
31	<i>Occidozyga sumatrana</i>	/	/	/	84	<i>Leptomantis fasciatus</i>	/	/	/
32	<i>Leptobrachella arayai</i>	/			85	<i>Leptomantis harrissoni</i>	/	/	/
33	<i>Leptobrachella baluensis</i>			/	86	<i>Leptomantis malkmusi</i>			/
34	<i>Leptobrachella dringi</i>			/	87	<i>Leptomantis rufipes</i>	/	/	/
35	<i>Leptobrachella fritiniensis</i>	/	/		88	<i>Nyctixalus pictus</i>	/	/	/
36	<i>Leptobrachella gracilis</i>	/	/	/	89	<i>Philautus aurantium</i>	/	/	/
37	<i>Leptobrachella mjobergi</i>	/	/	/	90	<i>Philautus davidlabangi</i>		/	/
38	<i>Leptobrachella picta</i>	/	/	/	91	<i>Philautus disregus</i>			/
39	<i>Leptobrachella sabahmontana</i>	/	/	/	92	<i>Philautus hosii</i>	/	/	/
40	<i>Leptobrachium abbotti</i>	/	/	/	93	<i>Philautus macroscelis</i>	/	/	/
41	<i>Leptobrachium ingeri</i>	/	/	/	94	<i>Philautus nephophilus</i>	/	/	/
42	<i>Leptobrachium montanum</i>	/	/	/	95	<i>Philautus petersi</i>	/	/	/
43	<i>Pelobatrachus baluensis</i>	/	/	/	96	<i>Philautus tectus</i>	/	/	/
44	<i>Pelobatrachus edwardinae</i>		/		97	<i>Polypedates colletti</i>	/	/	/
45	<i>Pelobatrachus kobayashi</i>			/	98	<i>Polypedates leucomystax</i>	/	/	/
46	<i>Pelobatrachus nasutus</i>	/	/	/	99	<i>Polypedates macrotis</i>	/	/	/
47	<i>Chaperina fusca</i>	/	/	/	100	<i>Polypedates oilophus</i>	/	/	/
48	<i>Kalophrynus baluensis</i>			/	101	<i>Rhacophorus baluensis</i>			/
49	<i>Kalophrynus heterochirus</i>	/	/	/	102	<i>Rhacophorus borneensis</i>			/
50	<i>Kalophrynus intermedius</i>	/	/	/	103	<i>Rhacophorus nigropalmatus</i>			/
51	<i>Kalophrynus meizon</i>	/	/	/	104	<i>Rhacophorus pardalis</i>	/	/	/
52	<i>Kalophrynus punctatus</i>	/	/	/	105	<i>Zhangixalus dulitensis</i>	/	/	/
53	<i>Kaloula baleata</i>	/		/					
						<b>TOTAL</b>	<b>82</b>	<b>67</b>	<b>100</b>

## SPEAKERS OF THE MONTH

### PROF DR INDRANEIL DAS

Prof Dr Indraneil Das is a staff of the Institute of Biodiversity and Environmental Conservation. Besides being a passionate frog researcher, he is also a philatelist, especially being interested in stamps depicting amphibians. In 2018, his collection received recognition from Guinness World Records for being the largest featuring amphibians in the world, consisting of 1,644 postage stamps.

Neil will talk at the IBFR Closing Ceremony 2021 on 1 December 2021, at 2:30 PM (Malaysia local time), entitled: The Collectible Frog.



### PROF DR ULMAR GRAFE

Prof Dr Ulmar Grafe is from the Institute for Biodiversity and Environmental Research, Universiti Brunei Darussalam, and has published widely on ecology and evolution of vertebrates of Borneo and Africa. His vast experience and knowledge made him an advisor to Steven Spielberg for the movie, "Jurassic Park".

The final webinar of IBFR 2021 will take place on 1 December 2021, at 3.30 PM (Malaysia local time). Prof Grafe's talk is entitled: Beyond taxonomy: The Ecology and Behaviour of Bornean Frogs.

## FROG NEWS BRIEFS

### NEWS FROM THE WORLD OF FROGS

#### APOSEMATISM FACILITATES THE DIVERSIFICATION OF PARENTAL CARE STRATEGIES IN POISON FROGS

JUAN D. CARVAJAL-CASTRO, FERNANDO VARGAS-SALINAS,  
SANTIAGO CASAS-CARDONA, BIBIANA ROJAS & JUAN C. SANTOS  
SCIENTIFIC REPORTS VOLUME 11, ARTICLE NUMBER: 19047 (2021)

Many organisms have evolved adaptations to increase the odds of survival of their offspring. Parental care has evolved several times in animals including ectotherms. In amphibians, ~10% of species exhibit parental care. Among these, poison frogs (Dendrobatidae) are well-known for their extensive care, which includes egg guarding, larval transport, and specialized tadpole provisioning with trophic eggs. At least one third of dendrobatids displaying aposematism by exhibiting warning coloration that informs potential predators about the presence of defensive skin toxins. Aposematism has a central role in poison frog diversification, including diet specialization, and visual and acoustic communication; and it is thought to have impacted their reproductive biology as well. Carvajal-Castro and his colleagues tested the latter association using multivariate phylogenetic methods at the family level. Their results show complex relationships between

aposematism and certain aspects of the reproductive biology in dendrobatids. In particular, aposematic species tend to use more specialized tadpole-deposition sites, such as phytotelmata, and ferry fewer tadpoles than non-aposematic species. It was proposed that aposematism may have facilitated the diversification of microhabitat use in dendrobatids in the context of reproduction. Furthermore, the use of resource-limited tadpole-deposition environments may have evolved in tandem with an optimal reproductive strategy characterized by few offspring, biparental care, and female provisioning of food in the form of unfertilized eggs. These authors also found that in phytotelm-breeders, the rate of transition from cryptic to aposematic phenotype is 17 to 19 times higher than vice versa. Therefore, it was inferred that the aposematism in dendrobatids might serve as an umbrella trait for the evolution and maintenance of their complex offspring-caring activities.

### NEW FROG STAMP

Peterspost is a postal and courier service operating on domestic Russian and foreign delivery lines. In Russia, it is a division of Peterstamps LLC and provides postal services throughout the Russian Federation on the basis of the license of the Federal Service for Supervision of Communications, Information Technology and Mass Media No. 157035 dated 20 July 2017.

Depicted here is an issue from 7 July 2021, commemorating EUROPA's (a PostEurop registered trademark under the aegis of PostEurop) 'Threatened Wildlife' theme for the year, by Peterspost and Finland. The set above shows the Moor Frog, *Rana arvalis* from Peterspost. It was issued in two formats: on the left, a sheetlet of five stamps (and one label of the same design), each of face value €3.70.



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## CONTACT US

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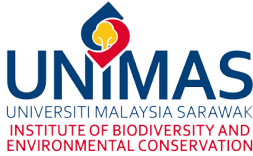
The International Bornean Frog Race



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