

# Supplemental Information Table S1

**Table S1. List of *Sphaerotheca* species used in the present study, including sample ID or voucher numbers, sample localities and GenBank accession numbers. Locality identifier (no) refer to the Fig. 1. Coordinates are given in decimal degrees. § = sample of photographed specimen (see Fig. 1).**

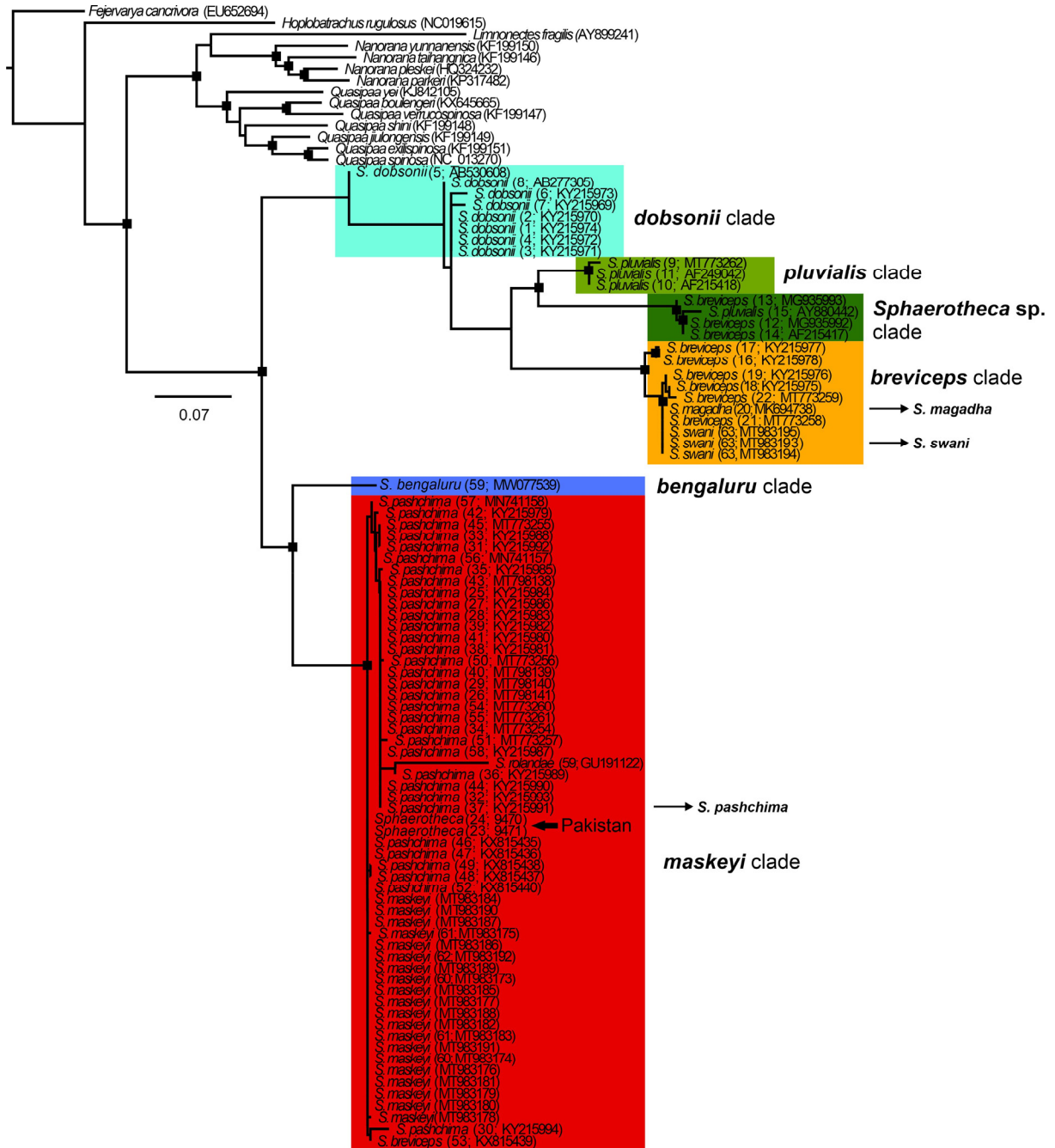
| no | Clade                   | Sample ID/voucher  | Source                         | Locality  | NCBI     | N       | E       |
|----|-------------------------|--------------------|--------------------------------|---|----------|---------|---------|
| 1  | <i>dobsonii</i>         | BNHS 6010          | Padhye et al. 2017             | Bankot-Mandangad Road, Maharashtra  | KY215974 | 17.9801 | 73.0649 |
| 2  | <i>dobsonii</i>         | INHER-Amphibia-86  | Padhye et al. 2017             | Tamhini, Pune, Maharashtra  | KY215970 | 18.4773 | 73.4267 |
| 3  | <i>dobsonii</i>         | WILD-16-AMP-651    | Padhye et al. 2017             | Devi Hasool, Maharashtra  | KY215971 | 16.7415 | 73.4320 |
| 4  | <i>dobsonii</i>         | BNHS 6008          | Padhye et al. 2017             | Devi Hasool, Maharashtra  | KY215972 | 16.7415 | 73.4320 |
| 5  | <i>dobsonii</i>         | -                  | Hasan et al. 2014              | Bajpe, Mangalore, Karnataka   | AB530608 | 12.9842 | 74.8813 |
| 6  | <i>dobsonii</i>         | -                  | Padhye et al. 2017             | India, Bankot, Maharashtra  | KY215973 | 17.9793 | 73.0487 |
| 7  | <i>dobsonii</i>         | -                  | Padhye et al. 2017             | India, Tamhini, Pune, Maharashtra   | KY215969 | 18.4469 | 73.4305 |
| 8  | <i>dobsonii</i>         | -                  | Kotaki et al. 2008             | Bajpe, Mangalore, Karnataka   | AB277305 | 12.9842 | 74.8813 |
| 9  | <i>ptinialis</i>        | INHER-Amphibia-180 | Dandekar et al. 2020           | Wadala Tukam near Tadoba, Chandrapur, Maharashtra   | MT773262 | 20.3000 | 79.2620 |
| 10 | <i>ptinialis</i>        | ZSI A9074          | Vences et al. 2000             | Pattaravakkam Hill, Tamil Nadu  | AF215418 | 12.6960 | 80.0300 |
| 11 | <i>ptinialis</i>        | ZSI 2681           | Bossuyt et al. 2000            | Sri Lanka   | AF249042 | 07.8731 | 80.7718 |
| 12 | <i>Sphaerotheca</i> sp. | -                  | Mulcahy et al. 2018            | Myanmar, Sagaing, Chathin, ca. 2 km WNW of Chathin Wildlife Sanctuary, San Mying camp, Kanbalu Township | MG935992 | 23.5744 | 95.7378 |
| 13 | <i>Sphaerotheca</i> sp. | -                  | Mulcahy et al. 2018            | Myanmar   | MG935993 | 21.9162 | 95.9560 |
| 14 | <i>Sphaerotheca</i> sp. | -                  | Vences et al. 2000             | Myanmar   | AF215417 | 21.9162 | 95.9560 |
| 15 | <i>Sphaerotheca</i> sp. | -                  | Delorme et al. 2004            | Myanmar   | AY880442 | 21.916  | 95.9560 |
| 16 | <i>breviceps</i>        | WILD-16-AMP-645    | Padhye et al. 2017             | Tanquebar, Tamil Nadu   | KY215978 | 11.0621 | 79.8128 |
| 17 | <i>breviceps</i>        | BNHS 6005          | Padhye et al. 2017             | Tanquebar, Tamil Nadu   | KY215977 | 11.0621 | 79.8128 |
| 18 | <i>breviceps</i>        | BNHS 6006          | Padhye et al. 2017             | Mathon, Jharkhand   | KY215975 | 23.7758 | 86.8092 |
| 19 | <i>breviceps</i>        | WILD-16-AMP-647    | Padhye et al. 2017             | Mathon, Jharkhand   | KY215976 | 23.7758 | 86.8092 |
| 20 | <i>breviceps</i>        | ZSI/WRC/2179       | Prasad et al. 2019             | Kodema, Jharkhand   | MK694738 | 24.4180 | 85.4680 |
| 21 | <i>breviceps</i>        | INHER-Amphibia-189 | Dandekar et al. 2020           | Bramhapuri, Chandrapur, Maharashtra   | MT773258 | 20.6237 | 79.8473 |
| 22 | <i>breviceps</i>        | INHER-Amphibia-191 | Dandekar et al. 2020           | Bramhapuri, Chandrapur, Maharashtra   | MT773259 | 20.6237 | 79.8473 |
| 23 | <i>maskei</i>           | 9470 <sup>§</sup>  | this study                     | Pakistan  | MW676044 | 34.7300 | 72.0900 |
| 24 | <i>maskei</i>           | 9471               | this study                     | Pakistan  | MW676045 | 34.7200 | 72.1000 |
| 25 | <i>maskei</i>           | BNHS 6014          | Padhye et al. 2017             | Talekhar, near the Phansad WLS  | KY215984 | 18.4700 | 72.9900 |
| 26 | <i>maskei</i>           | WILD-16-AMP-658    | Dandekar et al. 2020           | Talekhar, near the Phansad WLS  | MT798141 | 18.4700 | 72.9900 |
| 27 | <i>maskei</i>           | BNHS 6016          | Padhye et al. 2017             | Wada, Thane, Maharashtra  | KY215986 | 19.6870 | 73.0000 |
| 28 | <i>maskei</i>           | BNHS 6013          | Padhye et al. 2017             | Kolad, Raigad, Maharashtra  | KY215983 | 18.4037 | 73.3213 |
| 29 | <i>maskei</i>           | WILD-16-AMP-657    | Dandekar et al. 2020           | Kolad, Raigad, Maharashtra  | MT798140 | 18.4037 | 73.3213 |
| 30 | <i>maskei</i>           | WILD-16-AMP-644    | Padhye et al. 2017             | Tamhini, Pune   | KY215994 | 18.4773 | 73.4267 |
| 31 | <i>maskei</i>           | BNHS 6003          | Padhye et al. 2017             | Ahwa, Gujarat   | KY215992 | 20.7644 | 73.6757 |
| 32 | <i>maskei</i>           | WILD-16-AMP-643    | Padhye et al. 2017             | Ahwa, Gujarat   | KY215993 | 20.7644 | 73.6757 |
| 33 | <i>maskei</i>           | BNHS 6018          | Padhye et al. 2017             | Waghai-Ahwa Road, Dang, Gujarat   | KY215988 | 20.7090 | 73.7090 |
| 34 | <i>maskei</i>           | INHER-Amphibia-175 | Dandekar et al. 2020           | Pune City, Maharashtra  | MT773254 | 18.4871 | 73.7741 |
| 35 | <i>maskei</i>           | BNHS 6015          | Padhye et al. 2017             | Akole, Sangamner, Maharashtra   | KY215985 | 19.5180 | 73.9230 |
| 36 | <i>maskei</i>           | BNHS 6019          | Padhye et al. 2017             | Ahwa-Chinchli Road, Dang, Gujarat   | KY215989 | 20.7650 | 73.9720 |
| 37 | <i>maskei</i>           | WILD-16-AMP-642    | Padhye et al. 2017             | Saswad, Pune, Maharashtra   | KY215991 | 18.3075 | 74.0830 |
| 38 | <i>maskei</i>           | BNHS 6012          | Padhye et al. 2017             | Near Yellapur, Karnataka  | KY215981 | 14.9799 | 74.7314 |
| 39 | <i>maskei</i>           | ZSI-WRC A/1550     | Padhye et al. 2017             | Near Yellapur, Karnataka  | KY215982 | 14.9799 | 74.7314 |
| 40 | <i>maskei</i>           | WILD-16-AMP-656    | Dandekar et al. 2020           | Near Yellapur, Karnataka  | MT798139 | 14.9799 | 74.7314 |
| 41 | <i>maskei</i>           | ZSI-WRC A/1549     | Padhye et al. 2017             | Yellapur-Halliyal Rd., Karnataka  | KY215980 | 15.1602 | 74.7587 |
| 42 | <i>maskei</i>           | BNHS 6011          | Padhye et al. 2017             | Dharwad-Halliyal-Yellapur Rd., Karnataka  | KY215979 | 15.3494 | 74.8675 |
| 43 | <i>maskei</i>           | WILD-16-AMP-655    | Dandekar et al. 2020           | Dharwad-Halliyal-Yellapur Rd., Karnataka  | MT798138 | 15.3494 | 74.8675 |
| 44 | <i>maskei</i>           | WILD-16-AMP-641    | Padhye et al. 2017             | Rehekuri WLS, Maharashtra   | KY215990 | 18.5982 | 74.9742 |
| 45 | <i>maskei</i>           | INHER-Amphibia-236 | Dandekar et al. 2020           | Chikhaldara, Melghat, Maharashtra   | MT773255 | 21.4183 | 77.3157 |
| 46 | <i>maskei</i>           | Sb31HNBGU          | Choudhary et al. 2017, unpubl. | Chandrabani, Dehradun, Uttarakhand  | KX815435 | 30.2848 | 77.9737 |
| 47 | <i>maskei</i>           | Sb32HNBGU          | Choudhary et al. 2017, unpubl. | Chandrabani, Dehradun, Uttarakhand  | KX815436 | 30.2848 | 77.9737 |
| 48 | <i>maskei</i>           | SbHR25HNBGU        | Choudhary et al. 2017, unpubl. | Jageshpur, Haridwar, Uttarakhand  | KX815437 | 29.9189 | 78.1262 |
| 49 | <i>maskei</i>           | Sb27HNBGU          | Choudhary et al. 2017, unpubl. | Jageshpur, Haridwar, Uttarakhand  | KX815438 | 29.9189 | 78.1262 |
| 50 | <i>maskei</i>           | INHER-Amphibia-240 | Dandekar et al. 2020           | Pandharkawda, Maharashtra   | MT773256 | 20.0962 | 78.5322 |
| 51 | <i>maskei</i>           | INHER-Amphibia-239 | Dandekar et al. 2020           | Pandharkawda, Maharashtra   | MT773257 | 20.0962 | 78.5322 |
| 52 | <i>maskei</i>           | SbSG17HNBGU        | Choudhary et al. 2017, unpubl. | Ravadi, Uttarakhand   | KX815440 | 30.2218 | 78.7843 |
| 53 | <i>maskei</i>           | SbJH1HNBGU         | Choudhary et al. 2017, unpubl. | Joshimath, Uttarakhand  | KX815439 | 30.5544 | 79.5664 |
| 54 | <i>maskei</i>           | INHER-Amphibia-194 | Dandekar et al. 2020           | Maregaon, Chandrapur, Maharashtra   | MT773260 | 20.2579 | 79.7566 |
| 55 | <i>maskei</i>           | INHER-Amphibia-201 | Dandekar et al. 2020           | Ekara, Chandrapur, Maharashtra  | MT773261 | 20.3822 | 79.8102 |
| 56 | <i>maskei</i>           | WIADA225           | Prasad et al. 2020             | Panna Tiger Reserve, Madhya Pradesh   | MN741157 | 24.6300 | 79.9737 |
| 57 | <i>maskei</i>           | WIADA232           | Prasad et al. 2020             | Panna Tiger Reserve, Madhya Pradesh   | MN741158 | 24.6300 | 79.9737 |
| 58 | <i>maskei</i>           | BNHS 6017          | Padhye et al. 2017             | Salher Fort Road, Maharashtra   | KY215987 | 20.7470 | 73.9730 |
| 59 | <i>bengaluru</i>        | ZSI/WRS/A/2285     | Deepak et al. 2020             | Bengaluru, Karnataka  | MW077539 | 13.1876 | 77.5253 |
| 60 | <i>maskei</i>           | CDZMTU423          | Kathiwada et al. 2021          | Ghyalchok, Gorkha, Nepal  | MT983173 | ~27.81  | ~84.75  |
| 61 | <i>maskei</i>           | CDZMTU424          | Kathiwada et al. 2021          | Ghyalchok, Gorkha, Nepal  | MT983174 | ~27.81  | ~84.75  |
| 62 | <i>maskei</i>           | CDZMTU425          | Kathiwada et al. 2021          | Hattibang, Chitwan, Nepal   | MT983175 | ~27.73  | ~84.61  |
| 63 | <i>maskei</i>           | CDZMTU426          | Kathiwada et al. 2021          | ?   | MT983176 | -       | -       |
| 64 | <i>maskei</i>           | CDZMTU427          | Kathiwada et al. 2021          | ?   | MT983177 | -       | -       |
| 65 | <i>maskei</i>           | CDZMTU428          | Kathiwada et al. 2021          | ?   | MT983178 | -       | -       |
| 66 | <i>maskei</i>           | CDZMTU429          | Kathiwada et al. 2021          | ?   | MT983179 | -       | -       |
| 67 | <i>maskei</i>           | CDZMTU430          | Kathiwada et al. 2021          | ?   | MT983180 | -       | -       |
| 68 | <i>maskei</i>           | CDZMTU431          | Kathiwada et al. 2021          | ?   | MT983181 | -       | -       |
| 69 | <i>maskei</i>           | CDZMTU432          | Kathiwada et al. 2021          | ?   | MT983182 | -       | -       |
| 70 | <i>maskei</i>           | CDZMTU433          | Kathiwada et al. 2021          | Hattibang, Chitwan, Nepal   | MT983183 | ~27.73  | ~84.61  |
| 71 | <i>maskei</i>           | CDZMTU434          | Kathiwada et al. 2021          | ?   | MT983184 | -       | -       |
| 72 | <i>maskei</i>           | CDZMTU435          | Kathiwada et al. 2021          | ?   | MT983185 | -       | -       |
| 73 | <i>maskei</i>           | CDZMTU436          | Kathiwada et al. 2021          | ?   | MT983186 | -       | -       |
| 74 | <i>maskei</i>           | CDZMTU437          | Kathiwada et al. 2021          | ?   | MT983187 | -       | -       |
| 75 | <i>maskei</i>           | CDZMTU438          | Kathiwada et al. 2021          | ?   | MT983188 | -       | -       |
| 76 | <i>maskei</i>           | CDZMTU439          | Kathiwada et al. 2021          | ?   | MT983189 | -       | -       |
| 77 | <i>maskei</i>           | CDZMTU440          | Kathiwada et al. 2021          | ?   | MT983190 | -       | -       |
| 78 | <i>maskei</i>           | CDZMTU441          | Kathiwada et al. 2021          | ?   | MT983191 | -       | -       |
| 79 | <i>maskei</i>           | CDZMTU442          | Kathiwada et al. 2021          | Chhintang, Dhankuta, Nepal  | MT983192 | ~26.91  | ~87.16  |
| 80 | <i>breviceps</i>        | CDZMTU443          | Kathiwada et al. 2021          | Dharan (Jabdi), Sunsari district, Nepal   | MT983193 | ~26.67  | ~87.19  |
| 81 | <i>breviceps</i>        | CDZMTU444          | Kathiwada et al. 2021          | Dharan (Jabdi), Sunsari district, Nepal   | MT983194 | ~26.67  | ~87.19  |
| 82 | <i>breviceps</i>        | CDZMTU445          | Kathiwada et al. 2021          | Dharan (Jabdi), Sunsari district, Nepal   | MT983195 | ~26.67  | ~87.19  |
| 83 | <i>maskei</i>           | [rolandae]         | Sharma et al. 2009, unpubl.    | unknown   | GU191122 | -       | -       |

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# Supplemental Information Figure S1

**Figure S1.** Maximum-likelihood tree of the genus *Sphaerotheca* with main detected clades. The details on the geographic distribution of detected clades you can see on Fig. 2. Colors correspond with clades showed on Fig. 3. Rectangles at branch nodes refer to bootstrap values  $\geq 75$ .



### Supplemental Information Figure S2

**Figure S2.** Principal Component Analysis (PCA) of defined clades of *Sphaerotheca* genus with suggested taxonomic affiliation showing inter- and intra-clade distances. The oval outlines in PCA represent 95% confidence intervals. First (PC1) and second (PC2) principal components explain 18.4% and 13.9% of the observed variance.

