

## Supplementary Materials

**S1. Field dataset (Figure S1–S2, Table S1–S2):** We surveyed nine amphibian assemblages across Costa Rica in both versants (Caribbean and Pacific) and at elevations ranging from sea level to 1385 m (Figure S1). All surveys were conducted during the months of June and July between 2016–2018, except the locality of Alto Lari, which was sampled in March 2015. In total, we screened for *Bd* from 267 amphibians from 33 species.

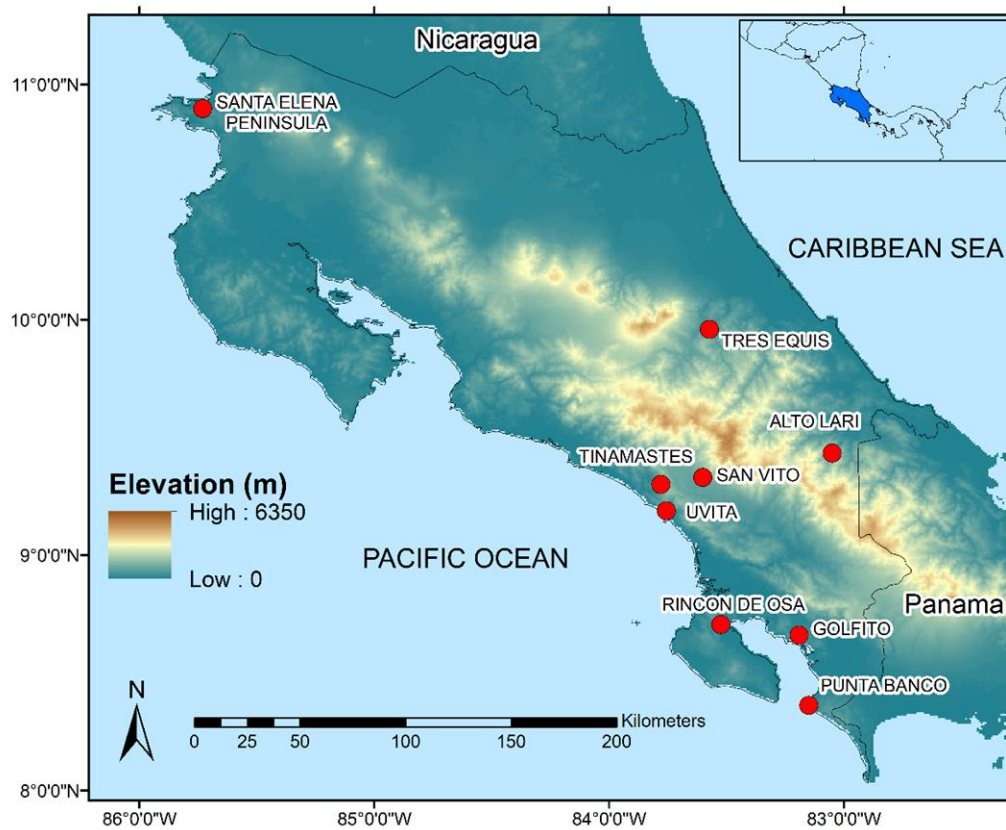
A total of 19 (58%) of the sampled species tested positive for *Bd* (Table S1 and S2, Figure S2). The overall infection rate in the field dataset was 39%, however this value showed high heterogeneity among sites, with values ranging from 0% in Punta Bunco-Burica to 60% in Santa Elena Peninsula (Table S2, Figure S2). In addition, we did not detect signs of disease in any infected individuals during our study and quantified low levels of infection in most of our samples (Table S1).

**S2. Species assessment (Table S3–S4):** We updated the last official list of amphibian species in Costa Rica published in 2011 [1] by consulting the Herpetological Database (“Herp Database”) of the Museo de Zoología at Universidad de Costa Rica (<http://museo.biologia.ucr.ac.cr/>) and taxonomists’ lists [2,3]. We also compiled a list of all the species that have been screened for *Bd* and the methods used for detection (histology or PCR).

Our new list of amphibians in Costa Rica includes a total of 215 species grouped in three orders, 16 families, and 48 genera (Table S1). This represents an addition of 20 species (ten anurans, nine salamanders, and one caecilian). In our review, we listed a total of 105 amphibian species (49%) that have been screened for *Bd* in Costa Rica (103 anurans and only two species of salamanders) (Table S2). In the field, the most common method used to detect *Bd* was qPCR, especially after 2005.

**S3. Combined dataset (Table S5–S6):** We generated a dataset of amphibian assemblages from multiple studies that screened for *Bd* in Costa Rica after 2000 using conventional PCR and qPCR methods [4–10] (including the 267 individuals from 33 species we tested in the “field dataset” (see supporting data S1). In total, this “combined dataset” consisted of 1750 individual records from 79 species and 20 localities at elevations ranging from sea level to 2000.

Overall, *Bd* prevalence in Costa Rica was estimated to be 0.23 (60% of species tested positive for *Bd*) (Table S3). The most robust GLM found both herpetological province and the FRHI as significant predictors of *Bd* prevalence (AIC=1700,  $p < 0.001$ , Table S4). In our analyses, we found an effect of the FRHI ( $F_{8,342} = 7.91$ ,  $p < 0.01$ , Table S6).



**Figure S1.** Map of Costa Rica showing elevational gradient and nine study sites surveyed for *Batrachochytrium dendrobatidis* in our field dataset.

**Table S1.** List of species where *Batrachochytrium dendrobatidis* (*Bd*) was surveyed in Costa Rica in our field dataset. For every species, the table shows the positive number of samples (total sample size), the overall prevalence (with 95% binomial CI), and the average (SE) of genomic equivalents of *Bd* zoospores quantified per species estimated from the *Bd*-positive samples.

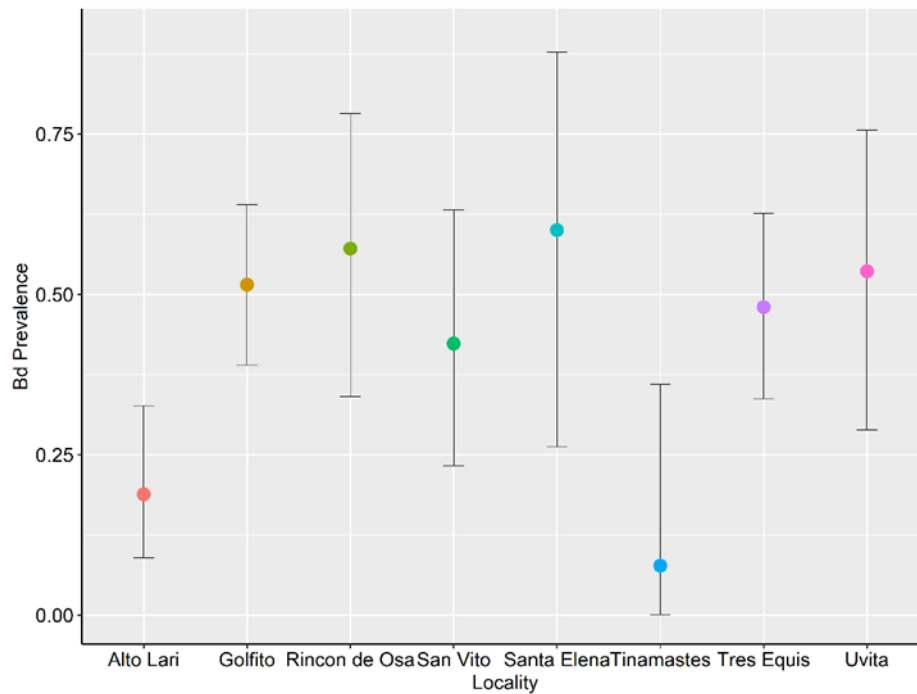
| Species                                 | Positive (n) | Percentage of Infection<br>(95% CI) | Average of <i>Bd</i> Load<br>(SE) |
|-----------------------------------------|--------------|-------------------------------------|-----------------------------------|
| <i>Agalychnis callidryas</i>            | 1 (3)        | 33 (1–91)                           | 0.6 (0.6)                         |
| <i>Agalychnis spurrelli</i>             | 3 (7)        | 43 (10–82)                          | 3.8 (1.9)                         |
| <i>Cochranella granulosa</i>            | 0 (2)        | 0 (0–84)                            | 0 (0)                             |
| <i>Cochranella spinosa</i>              | 0 (2)        | 0 (0–84)                            | 0 (0)                             |
| <i>Craugastor crassidigitus</i>         | 2 (10)       | 20 (3–56)                           | 2.3 (1.4)                         |
| <i>Craugastor fitzingeri</i>            | 0 (11)       | 0 (0–29)                            | 0 (0)                             |
| <i>Craugastor ranoides</i>              | 2 (2)        | 1 (16–100)                          | 13.3 (3.6)                        |
| <i>Craugastor taurus</i>                | 0 (9)        | 0 (0–34)                            | 0 (0)                             |
| <i>Dendropsophus ebraccatus</i>         | 20 (35)      | 57 (39–74)                          | 4.1 (0.9)                         |
| <i>Diasporus tigrillo</i>               | 0 (5)        | 0 (0–52)                            | 0 (0)                             |
| <i>Engystomops pustulosus</i>           | 5 (6)        | 83 (36–100)                         | 8.6 (2.9)                         |
| <i>Espadarana prosoblepon</i>           | 2 (5)        | 40 (5–85)                           | 2.7 (2.7)                         |
| <i>Hyalinobatrachium colymbiphyllum</i> | 1 (4)        | 25 (1–91)                           | 0 (0)                             |
| <i>Hyalinobatrachium valerioi</i>       | 2 (4)        | 50 (7–93)                           | 4.2 (2.6)                         |
| <i>Boana rosenbergi</i>                 | 0 (1)        | 0 (0–98)                            | 0 (0)                             |
| <i>Incilius coniferus</i>               | 0 (7)        | 0 (0–41)                            | 0 (0)                             |

|                                  |                  |                   |                   |
|----------------------------------|------------------|-------------------|-------------------|
| <i>Incilius luetkenii</i>        | 0 (1)            | 0 (0–98)          | 0 (0)             |
| <i>Leptodactylus insularum</i>   | 0 (1)            | 0 (0–98)          | 0 (0)             |
| <i>Leptodactylus melanonotus</i> | 4 (7)            | 57 (18–90)        | 6.8 (2.4)         |
| <i>Leptodactylus savagei</i>     | 1 (1)            | 100 (25–100)      | 33.5 (0)          |
| <i>Lithobates vaillanti</i>      | 0 (3)            | 0 (0–70)          | 0 (0)             |
| <i>Oophaga granulifera</i>       | 8 (10)           | 80 (44–98)        | 5.1 (1.0)         |
| <i>Oophaga pumilio</i>           | 0 (1)            | 0 (0–98)          | 0 (0)             |
| <i>Pristimantis cerasinus</i>    | 4 (16)           | 25 (7–52)         | 6.8 (6.4)         |
| <i>Pristimantis cruentus</i>     | 0 (3)            | 0 (0–70)          | 0 (0)             |
| <i>Pristimantis ridens</i>       | 2 (8)            | 25 (3–65)         | 12.3 (12.3)       |
| <i>Ptychohyla legleri</i>        | 0 (1)            | 0 (0–98)          | 0 (0)             |
| <i>Rhaebo haematiticus</i>       | 1 (11)           | 9 (1–41)          | 0.7 (0.7)         |
| <i>Rhinella marina</i>           | 0 (5)            | 0 (0–52)          | 0 (0)             |
| <i>Sachatamia ilex</i>           | 0 (1)            | 0 (0–98)          | 0 (0)             |
| <i>Smilisca phaeota</i>          | 2 (11)           | 18 (2–53)         | 10.1 (8.6)        |
| <i>Smilisca sordida</i>          | 44 (71)          | 62 (50–73)        | 2.7 (0.5)         |
| <i>Teratohyla pulverata</i>      | 1 (2)            | 50 (1–99)         | 2.9 (2.9)         |
| <i>Tlalocohyla loquax</i>        | 1 (1)            | 100 (25–100)      | 13.1 (0)          |
| <b>Total</b>                     | <b>106 (267)</b> | <b>40 (34–46)</b> | <b>3.6 (0.68)</b> |

All the species are classified as Least Concern (LC) according to the International Union for Conservation of Nature (IUCN; <https://www.iucnredlist.org>) with the following exceptions: *Craugastor ranoides* (Critically Endangered), *C. taurus* (Critically Endangered); *Oophaga granulifera* (Vulnerable); *Ptychohyla legleri* (Endangered).

**Table S2.** Percentage of and infection intensity of *Batrachochytrium dendrobatidis* (*Bd*) at nine sites in Costa Rica in our field dataset. For each study site the table shows number of samples (number of *Bd*-positive samples) and prevalence (with 95% binomial CI) of *Bd* in amphibian assemblages.

| Locality                  | Elevation (m) | Altitudinal Belt | n ( <i>Bd</i> positive) | Percentage of individuals Infected (95% CI) |
|---------------------------|---------------|------------------|-------------------------|---------------------------------------------|
| San Vito, Coto Brus       | 1120–1385     | Premontane       | 26 (11)                 | 42.3 (23.3–63.1)                            |
| Tinamastes, Pérez Zeledón | 700–800       | Premontane       | 13 (1)                  | 7.7 (0.1–36.0)                              |
| Uvita, Osa                | 0–300         | Tropical         | 19 (10)                 | 53.6 (28.9–75.6)                            |
| Rincón, Osa               | 0–50          | Tropical         | 21 (12)                 | 57.1 (34.0–78.2)                            |
| Golfito                   | 0–50          | Tropical         | 66 (34)                 | 51.5 (38.9–64.0)                            |
| Punta Banco-Burica        | 0–50          | Tropical         | 14 (0)                  | 0.0 (0.0–23.2)                              |
| Santa Elena Peninsula     | 0–100         | Tropical         | 10 (6)                  | 60.0 (26.2–87.8)                            |
| Tres Equis, Turrialba     | 400–600       | Tropical         | 50 (24)                 | 48.0 (33.7–62.6)                            |
| Alto Lari                 | 300–600       | Tropical         | 48 (9)                  | 18.8 (8.9–32.6)                             |



**Figure S2.** Mean prevalence of *Batrachochytrium dendrobatidis* (Bd) in amphibian assemblages from the nine surveyed sites in Costa Rica in our field dataset (with 95% binomial CI). The plot does not display results for the study site at Punta Banco because no sampled individuals tested positive for Bd.

**Table S3.** List of 215 amphibian species in Costa Rica distributed by herpetological province and elevational range. For every taxon, numbers in square brackets indicate the number of genera and numbers displayed in parenthesis indicates the number of species. For each of the three amphibian orders, the number preceding the genera represents the number of families. The table also specifies endemic species, IUCN status, and environmental vulnerability scores (EVS). Symbology for herpetological provinces: CL= Caribbean Lowlands; CT= Cordillera de Talamanca; MSCC=Mountain Slopes and Cordillera Central; PN= Pacific Northwest; PS=Pacific Southwest. IUCN Red List categories: DD = Data Deficient; LC = Least Concerned; NT = Near Threatened; VU = Vulnerable; EN = Endangered; CR = Critically Endangered; EX = Extinct in the wild. EVS categories: 0 = now immediate risk (EVS<3); 1 = low vulnerability species (EVS of 3–9); 2 = medium vulnerability species (EVS of 10–13); 3 = high vulnerability species (EVS of 14–17).

| Amphibian Taxa                | Endemic | EVS | IUCN status | CL | CT | MSCC | PN | PS | Elevation (m) |
|-------------------------------|---------|-----|-------------|----|----|------|----|----|---------------|
| <b>Anura 13 [41] (154)</b>    |         |     |             |    |    |      |    |    |               |
| <b>Aromobatidae [1] (1)</b>   |         |     |             |    |    |      |    |    |               |
| <i>Allobates talamancae</i>   |         | 0   | LC          | X  |    | X    |    | X  | 0–800         |
| <b>Bufonidae [4] (18)</b>     |         |     |             |    |    |      |    |    |               |
| <i>Atelopus chiriquiensis</i> | X       | 2   | CR          |    | X  | X    |    |    | 1089–2500     |
| <i>Atelopus chirripoensis</i> | X       | 3   | CR          |    | X  |      |    |    | 3400–3500     |
| <i>Atelopus senex</i>         |         | 3   | CR          |    | X  | X    |    |    | 1250–2200     |
| <i>Atelopus varius</i>        |         | 2   | CR          | X  | X  | X    | X  | X  | 16–2110       |
| <i>Incilius aucoinae</i>      |         | 3   | LC          |    |    | X    | X  | X  | 5–760         |
| <i>Incilius chompipe</i>      | X       | NE  | VU          |    |    | X    |    |    | 1400–2250     |
| <i>Incilius coccifer</i>      |         | 0   | LC          | X  |    | X    | X  | X  | 1–1435        |
| <i>Incilius coniferus</i>     |         | 0   | LC          | X  | X  | X    | X  | X  | 2–1720        |
| <i>Incilius epioticus</i>     |         | 2   | LC          |    | X  | X    |    |    | 1051–2060     |
| <i>Incilius fastidiosus</i>   |         | 2   | CR          |    | X  | X    |    | X  | 760–2400      |
| <i>Incilius guanacaste</i>    | X       | NE  | DD          |    |    | X    |    |    | 1700–2000     |
| <i>Incilius holdridgei</i>    | X       | 3   | CR          |    |    | X    |    |    | 1800–2200     |
| <i>Incilius luetkenii</i>     |         | 0   | LC          |    |    | X    | X  |    | 6–1140        |

|                                          |   |    |    |   |   |   |   |           |
|------------------------------------------|---|----|----|---|---|---|---|-----------|
| <i>Incilius melanochlorus</i>            |   | 3  | LC | X |   | X | X | 5–1400    |
| <i>Incilius periglenes</i>               | X | 3  | EX |   |   | X |   | 1500–1650 |
| <i>Incilius valliceps</i>                |   | 0  | LC | X |   |   |   | 30–495    |
| <i>Rhaebo haematiticus</i>               |   | 0  | LC | X | X | X | X | 20–1300   |
| <i>Rhinella horribilis</i>               |   | 0  | LC | X | X | X | X | 1–1600    |
| <b>Centrolenidae [5] (14)</b>            |   |    |    |   |   |   |   |           |
| <i>Cochranella euknemos</i>              |   | 0  | LC |   |   | X |   | 840–1500  |
| <i>Cochranella granulosa</i>             |   | 0  | LC | X |   | X | X | 40–1500   |
| <i>Espadarana prosoblepon</i>            |   | 0  | LC | X | X | X | X | 20–1900   |
| <i>Hyalinobatrachium chirripoi</i>       |   | 0  | LC | X |   |   |   | 50–250    |
| <i>Hyalinobatrachium colymbiophyllum</i> |   | 0  | LC | X | X | X |   | 10–1800   |
| <i>Hyalinobatrachium diana*</i>          | X | NE | NE | X |   | X |   | 400–900   |
| <i>Hyalinobatrachium fleischmanni</i>    |   | 0  | LC | X | X | X | X | 0–1900    |
| <i>Hyalinobatrachium talamancae</i>      | X | 3  | LC | X |   | X |   | 400–1500  |
| <i>Hyalinobatrachium valerioi</i>        |   | 0  | LC | X |   | X | X | 6–1100    |
| <i>Hyalinobatrachium vireovittatum</i>   |   | 2  | LC |   |   | X | X | 170–1000  |
| <i>Sachatamia albomaculata</i>           |   | 0  | LC | X |   | X | X | 20–1500   |
| <i>Sachatamia ilex</i>                   |   | 0  | LC | X |   | X |   | 250–1000  |
| <i>Teratohyla pulverata</i>              |   | 0  | LC | X |   | X | X | 0–1000    |
| <i>Teratohyla spinosa</i>                |   | 0  | LC | X |   | X |   | 0–900     |
| <b>Craugastoridae [3] (41)</b>           |   |    |    |   |   |   |   |           |
| <i>Craugastor aenigmaticus*</i>          | X | NE | NE |   | X |   |   | 2300–2700 |
| <i>Craugastor andi</i>                   |   | 3  | CR |   |   | X |   | 900–1400  |
| <i>Craugastor angelicus</i>              | X | 3  | CR | X |   | X |   | 650–1600  |
| <i>Craugastor bransfordii</i>            |   | 2  | LC | X |   | X | X | 6–900     |
| <i>Craugastor catalinae</i>              |   | 2  | CR |   | X | X |   | 1219–1800 |
| <i>Craugastor crassidigitus</i>          |   | 0  | LC | X | X | X | X | 2–2000    |
| <i>Craugastor cuaquero</i>               | X | 3  | DD |   |   | X |   | 1500–1650 |
| <i>Craugastor escoces</i>                | X | 3  | EX |   | X | X |   | 1000–2110 |
| <i>Craugastor fitzingeri</i>             |   | 0  | LC | X | X | X | X | 1–1500    |
| <i>Craugastor fleischmanni</i>           |   | 3  | CR |   | X | X |   | 1050–2500 |
| <i>Craugastor gabbi*</i>                 | X | NE | NE |   |   | X | X | 1100–1280 |
| <i>Craugastor gollmeri</i>               |   | 1  | LC | X | X | X |   | 10–1520   |
| <i>Craugastor gulosus</i>                |   | 2  | DD |   | X | X |   | 1000–1900 |
| <i>Craugastor megacephalus</i>           |   | 0  | LC | X |   | X |   | 1–1200    |
| <i>Craugastor melanostictus</i>          |   | 2  | LC |   | X | X |   | 1150–2700 |
| <i>Craugastor mimus</i>                  |   | 0  | LC | X |   | X |   | 15–1260   |
| <i>Craugastor noblei</i>                 |   | 0  | LC | X |   | X | X | 4–1200    |
| <i>Craugastor obesus</i>                 |   | 3  | CR |   |   | X |   | 400–1700  |
| <i>Craugastor persimilis</i>             | X | 3  | LC | X |   | X |   | 0–1400    |
| <i>Craugastor phasma</i>                 | X | 3  | DD |   | X |   |   | 1850      |
| <i>Craugastor podiciferus</i>            |   | 2  | NT |   | X | X |   | 1089–2650 |
| <i>Craugastor polyptychus</i>            |   | 0  | LC | X |   | X |   | 2–900     |
| <i>Craugastor ranoides</i>               |   | 1  | CR | X |   | X | X | 0–1300    |
| <i>Craugastor rayo</i>                   | X | 3  | DD |   | X | X |   | 1480–1820 |
| <i>Craugastor rhyacobatrachus</i>        |   | 2  | CR |   | X | X |   | 400–1800  |
| <i>Craugastor rugosus</i>                |   | 2  | LC |   |   | X | X | 10–1200   |
| <i>Craugastor stejnegerianus</i>         |   | 2  | LC |   |   | X | X | 3–1400    |
| <i>Craugastor talamancae</i>             |   | 1  | LC | X |   | X |   | 15–710    |
| <i>Craugastor taurus</i>                 |   | 2  | CR |   |   |   | X | 5–550     |
| <i>Craugastor underwoodi</i>             |   | 2  | LC |   | X | X | X | 920–1760  |
| <i>Craugastor zunigai*</i>               | X | NE | NE |   | X | X |   | 1500–2100 |
| <i>Pristimantis altae</i>                |   | 2  | LC | X |   | X |   | 50–1500   |
| <i>Pristimantis caryophyllaceus</i>      |   | 0  | NT | X | X | X |   | 0–1900    |
| <i>Pristimantis cerasinus</i>            |   | 0  | LC | X | X | X | X | 10–1400   |
| <i>Pristimantis cruentus</i>             |   | 0  | LC | X | X | X | X | 40–2400   |
| <i>Pristimantis gaigei</i>               |   | 0  | LC | X |   |   |   | 0–200     |
| <i>Pristimantis moro</i>                 |   | 0  | LC |   |   | X |   | 900–1250  |

|                                        |   |    |    |   |   |   |   |   |           |
|----------------------------------------|---|----|----|---|---|---|---|---|-----------|
| <i>Pristimantis pardalis</i>           |   | 0  | LC |   | X | X |   |   | 300–1450  |
| <i>Pristimantis ridens</i>             |   | 0  | LC | X | X | X | X | X | 0–1600    |
| <i>Pristimantis taeniatus</i>          |   | NE | LC |   |   | X |   |   | 1000–1200 |
| <i>Strabomantis bufoniformis</i>       |   | 0  | LC | X |   |   |   |   | 0–50      |
| <b>Dendrobatidae [4] (7)</b>           |   |    |    |   |   |   |   |   |           |
| <i>Dendrobates auratus</i>             |   | 0  | LC | X |   | X | X | X | 2–819     |
| <i>Oophaga granulifera</i>             |   | 2  | VU |   |   |   |   | X | 0–600     |
| <i>Oophaga pumilio</i>                 |   | 0  | LC | X |   | X | X |   | 0–980     |
| <i>Phyllobates lugubris</i>            |   | 0  | LC | X |   |   |   |   | 0–750     |
| <i>Phyllobates vittatus</i>            | X | 2  | EN |   |   |   |   | X | 0–600     |
| <i>Silverstoneia flotator</i>          |   | 0  | LC | X |   | X |   | X | 0–900     |
| <i>Silverstoneia nubicola</i>          |   | 0  | CR |   |   | X |   | X | 1050–1600 |
| <b>Eleutherodactylidae [2] (9)</b>     |   |    |    |   |   |   |   |   |           |
| <i>Diasporus amirae*</i>               | X | NE | NE |   |   | X |   |   | 1000–1100 |
| <i>Diasporus diastema</i>              |   | 0  | LC | X | X | X | X | X | 0–1600    |
| <i>Diasporus hylaeformis</i>           | X | 2  | LC |   | X | X |   | X | 1500–2500 |
| <i>Diasporus tigrillo</i>              | X | 3  | DD | X |   |   |   |   | 400–450   |
| <i>Diasporus ventrimaculatus</i>       | X | NE | LC |   | X |   |   |   | 2500–2700 |
| <i>Diasporus vocator</i>               |   | 0  | LC |   | X | X |   | X | 0–1650    |
| <i>Eleutherodactylus coqui</i>         |   | NE | LC |   |   | X |   |   | 650       |
| <i>Eleutherodactylus johnstonei</i>    |   | NE | LC |   |   |   | X |   | 1200      |
| <i>Eleutherodactylus planirostris*</i> |   | NE | NE |   |   |   |   |   | Unknown   |
| <b>Hemiphractidae [1] (1)</b>          |   |    |    |   |   |   |   |   |           |
| <i>Gastrotheca cornuta</i>             |   | 0  | EN | X |   | X |   |   | 300–800   |
| <b>Hylidae [13] (40)</b>               |   |    |    |   |   |   |   |   |           |
| <i>Boana rosenbergi</i>                |   | 0  | LC |   |   |   | X | X | 0–900     |
| <i>Boana rufitela</i>                  |   | 0  | LC | X |   | X |   |   | 0–750     |
| <i>Dendropsophus ebraccatus</i>        |   | 0  | LC | X | X | X | X | X | 0–1600    |
| <i>Dendropsophus microcephalus</i>     |   | 0  | LC | X | X | X | X | X | 0–1200    |
| <i>Dendropsophus phlebodes</i>         |   | 0  | LC | X |   | X |   |   | 0–750     |
| <i>Duellmanohyla lythodes</i>          |   | 2  | DD | X |   |   |   |   | 150–450   |
| <i>Duellmanohyla rufiocularis</i>      | X | 3  | LC | X | X | X | X | X | 650–1600  |
| <i>Duellmanohyla uranochroa</i>        |   | 2  | LC | X | X | X |   |   | 300–1750  |
| <i>Ecnomiohyla bailarina*</i>          |   | NE | NE | X |   |   |   |   | 300–750   |
| <i>Ecnomiohyla fimbrimembra</i>        |   | 2  | EN |   |   | X |   |   | 750–1900  |
| <i>Ecnomiohyla miliaria</i>            |   | 0  | VU | X |   | X |   | X | 0–1350    |
| <i>Ecnomiohyla sukia</i>               | X | NE | LC | X |   | X |   |   | 400–1000  |
| <i>Ecnomiohyla veraguensis*</i>        |   | NE | NE | X |   |   |   |   | NE        |
| <i>Hyloscirtus colymba</i>             |   | 0  | CR |   |   | X |   |   | 600–1200  |
| <i>Hyloscirtus palmeri</i>             |   | 0  | LC | X |   | X |   |   | 400–1000  |
| <i>Isthmohyla angustilineata</i>       |   | 2  | CR |   | X | X | X |   | 1500–2350 |
| <i>Isthmohyla calypsa</i>              |   | 2  | CR |   | X |   |   |   | 1700–2300 |
| <i>Isthmohyla debilis</i>              |   | 2  | CR |   | X | X |   |   | 900–1450  |
| <i>Isthmohyla lancasteri</i>           |   | 2  | LC | X |   | X |   |   | 350–1400  |
| <i>Isthmohyla picadoi</i>              |   | 2  | LC |   | X | X |   |   | 1700–2900 |
| <i>Isthmohyla pictipes</i>             |   | 3  | EN |   | X | X |   |   | 1900–2800 |
| <i>Isthmohyla pseudopuma</i>           |   | 2  | LC |   | X | X |   |   | 1100–2350 |
| <i>Isthmohyla rivularis</i>            |   | 2  | CR |   | X | X | X |   | 1200–2450 |
| <i>Isthmohyla tica</i>                 |   | 2  | CR |   | X | X | X |   | 720–1750  |
| <i>Isthmohyla xanthosticta</i>         | X | 3  | DD |   |   | X |   |   | 2150      |
| <i>Isthmohyla zeteki</i>               |   | 2  | LC |   | X | X |   |   | 1200–1800 |
| <i>Osteopilus septentrionalis</i>      |   | 0  | LC | X |   |   |   |   | 0–10      |
| <i>Ptychohyla legleri</i>              |   | 2  | EN |   |   | X |   | X | 600–1500  |
| <i>Scinax boulengeri</i>               |   | 0  | LC | X |   |   | X | X | 1–700     |
| <i>Scinax elaeochroa</i>               |   | 0  | LC | X | X | X | X | X | 0–1200    |
| <i>Scinax staufferi</i>                |   | 0  | LC | X |   |   | X |   | 0–700     |
| <i>Smilisca baudinii</i>               |   | 0  | LC |   |   | X | X | X | 0–1600    |
| <i>Smilisca manisorum*</i>             |   | NE | NE | X |   |   |   |   | 0–750     |

|                                    |    |     |    |   |   |   |   |           |
|------------------------------------|----|-----|----|---|---|---|---|-----------|
| <i>Smilisca phaeota</i>            | 0  | LC  | X  |   | X | X | X | 0–1100    |
| <i>Smilisca puma</i>               | 2  | LC  | X  |   |   |   |   | 0–550     |
| <i>Smilisca sila</i>               | 0  | LC  |    | X | X | X | X | 0–1000    |
| <i>Smilisca sordida</i>            | 0  | LC  | X  | X | X | X | X | 0–1550    |
| <i>Tlalocohyla loquax</i>          | 0  | LC  | X  |   | X |   |   | 50–1100   |
| <i>Trachycephalus typhonius</i>    | 0  | LC  | X  |   | X | X | X | 0–1100    |
| <i>Triprion spinosus</i>           | 0  | LC  | X  |   | X |   | X | 350–1400  |
| <b>Leptodactylidae [2] (6)</b>     |    |     |    |   |   |   |   |           |
| <i>Engystomops pustulosus</i>      | 0  | LC  | X  |   | X | X | X | 0–1550    |
| <i>Leptodactylus fragilis</i>      | 0  | LC  | X  |   |   | X | X | 1–650     |
| <i>Leptodactylus insularum</i>     | 0  | LC  |    |   |   | X | X | 0–450     |
| <i>Leptodactylus melanonotus</i>   | 0  | LC  | X  | X | X | X | X | 0–1450    |
| <i>Leptodactylus poecilochilus</i> | 0  | LC  | X  |   | X | X | X | 0–1150    |
| <i>Leptodactylus savagei</i>       | 0  | LC  | X  | X | X | X | X | 0–1200    |
| <b>Microhylidae [2] (3)</b>        |    |     |    |   |   |   |   |           |
| <i>Ctenophryne aterrima</i>        | 0  | LC  | X  |   | X | X | X | 0–1600    |
| <i>Hypopachus pictiventris</i>     | 2  | LC  | X  |   | X | X |   | 1–800     |
| <i>Hypopachus variolosus</i>       | 0  | LC  |    |   | X | X |   | 0–1600    |
| <b>Phyllomedusidae [2] (7)</b>     |    |     |    |   |   |   |   |           |
| <i>Agalychnis annae</i>            | 3  | LC  |    | X | X | X |   | 780–1650  |
| <i>Agalychnis callidryas</i>       | 0  | LC  | X  |   | X | X | X | 0–1250    |
| <i>Agalychnis lemur</i>            | 0  | CR  | X  |   | X |   |   | 450–1600  |
| <i>Agalychnis saltator</i>         | 0  | LC  | X  |   | X |   |   | 0–1000    |
| <i>Agalychnis spurrelli</i>        | 0  | LC  | X  |   | X |   | X | 0–900     |
| <i>Cruziohyla calcarifer</i>       | 0  | LC  | X  |   |   |   |   | 0–800     |
| <i>Cruziohyla sylviae*</i>         | NE | NE* | X  |   |   |   |   | 0–800     |
| <b>Ranidae [1] (6)</b>             |    |     |    |   |   |   |   |           |
| <i>Lithobates catesbeianus</i>     | NE | LC  |    |   | X |   |   | 1200      |
| <i>Lithobates forreri</i>          | 0  | LC  | X  | X | X | X | X | 0–1550    |
| <i>Lithobates taylori</i>          | 2  | LC  | X  | X | X | X |   | 0–3200    |
| <i>Lithobates vaillanti</i>        | 0  | LC  | X  |   | X | X |   | 0–900     |
| <i>Lithobates vibicarius</i>       | 2  | LC  |    | X | X |   |   | 1400–2700 |
| <i>Lithobates warszewitschii</i>   | 0  | LC  | X  | X | X | X | X | 0–1750    |
| <b>Rhinophrynidae [1] (1)</b>      |    |     |    |   |   |   |   |           |
| <i>Rhinophrynus dorsalis</i>       | 0  | LC  |    |   |   | X |   | 0–300     |
| <b>Order Caudata 1 [3] (53)</b>    |    |     |    |   |   |   |   |           |
| <b>Plethodontidae [3] (53)</b>     |    |     |    |   |   |   |   |           |
| <i>Bolitoglossa alvaradoi</i>      | X  | 3   | EN | X |   | X |   | 15–1116   |
| <i>Bolitoglossa aurae*</i>         | X  | NE  | NE |   |   | X |   | 1300      |
| <i>Bolitoglossa aureogularis*</i>  | X  | NE  | LC |   | X |   |   | 1680–2100 |
| <i>Bolitoglossa bramei</i>         |    | NE  | LC |   | X |   |   | 1900–3200 |
| <i>Bolitoglossa cerroensis</i>     | X  | 3   | LC |   | X |   |   | 2100–3300 |
| <i>Bolitoglossa colonnea</i>       |    | 2   | LC | X | X | X | X | 2–1600    |
| <i>Bolitoglossa compacta</i>       |    | 2   | LC |   | X |   |   | 1650–2780 |
| <i>Bolitoglossa diminuta</i>       | X  | 3   | DD |   | X |   |   | 1555      |
| <i>Bolitoglossa epimela</i>        | X  | 3   | DD |   | X | X |   | 775–1555  |
| <i>Bolitoglossa gomezi</i>         |    | NE  | LC |   | X |   |   | 1170–2400 |
| <i>Bolitoglossa gracilis</i>       | X  | 3   | LC |   | X | X |   | 1225–1380 |
| <i>Bolitoglossa kamuk*</i>         | X  | NE  | DD |   | X |   |   | 2870–3126 |
| <i>Bolitoglossa lignicolor</i>     |    | 2   | LC |   |   | X | X | 2–1050    |
| <i>Bolitoglossa marmorea</i>       |    | 2   | LC |   | X |   |   | 1920–3444 |
| <i>Bolitoglossa minutula</i>       |    | 2   | LC |   | X | X |   | 1670–2660 |
| <i>Bolitoglossa nigrescens</i>     | X  | 3   | EN |   | X |   |   | 1650–3000 |
| <i>Bolitoglossa obscura</i>        | X  | 3   | DD |   | X |   |   | 1555      |
| <i>Bolitoglossa pesrubra</i>       | X  | 3   | VU |   | X |   |   | 1875–3620 |
| <i>Bolitoglossa pygmaea*</i>       |    | NE  | NE |   | X |   |   | 3000–3335 |
| <i>Bolitoglossa robinsoni</i>      |    | NE  | LC |   | X |   |   | 2450–3335 |
| <i>Bolitoglossa robusta</i>        |    | 2   | LC |   | X | X |   | 500–2400  |

|                                   |   |    |    |   |   |   |   |   |           |
|-----------------------------------|---|----|----|---|---|---|---|---|-----------|
| <i>Bolitoglossa schizodactyla</i> |   | 2  | NA | X |   | X |   |   | 300–850   |
| <i>Bolitoglossa sombra</i>        |   | 3  | VU |   | X | X |   |   | 1500–2300 |
| <i>Bolitoglossa sooyorum</i>      | X | 2  | EN |   | X |   |   |   | 2355–3100 |
| <i>Bolitoglossa splendida*</i>    | X | NE | DD |   | X |   |   |   | 1825      |
| <i>Bolitoglossa striatula</i>     |   | 0  | LC | X |   | X | X | X | 10–1380   |
| <i>Bolitoglossa subpalmata</i>    | X | 3  | LC |   |   | X | X |   | 1054–2900 |
| <i>Bolitoglossa tica</i>          | X | NE | LC |   | X | X |   |   | 1745–2500 |
| <i>Nototriton abscondens</i>      | X | 3  | LC |   |   | X | X |   | 960–2500  |
| <i>Nototriton costaricense*</i>   | X | NE | NE |   | X |   |   |   | 1500      |
| <i>Nototriton gamezi</i>          | X | 3  | LC |   |   | X |   |   | 1550–1650 |
| <i>Nototriton guanacaste</i>      | X | 3  | VU |   |   | X |   |   | 1400–1580 |
| <i>Nototriton major</i>           | X | 3  | LC |   |   | X |   |   | 870–1200  |
| <i>Nototriton matama*</i>         | X | NE | LC |   |   | X |   |   | 1300      |
| <i>Nototriton picadoi</i>         | X | 3  | LC |   |   | X |   |   | 1200–2200 |
| <i>Nototriton richardi</i>        | X | 3  | LC |   |   | X |   |   | 1370–1800 |
| <i>Nototriton tapanti</i>         | X | 3  | LC |   |   | X |   |   | 1300      |
| <i>Oedipina alfaroi</i>           |   | 2  | VU | X |   |   |   |   | 19–850    |
| <i>Oedipina alleni</i>            | X | 2  | LC |   |   |   |   | X | 2–880     |
| <i>Oedipina altura</i>            | X | 3  | CR |   | X |   |   |   | 2286–2320 |
| <i>Oedipina berlini*</i>          | X | NE | NE | X |   | X |   |   | 540–850   |
| <i>Oedipina carablanca</i>        | X | 3  | LC | X |   |   |   |   | 60–750    |
| <i>Oedipina collaris</i>          |   | 1  | DD |   |   | X |   |   | 600       |
| <i>Oedipina cyclocauda</i>        |   | 0  | LC | X |   |   |   |   | 0–600     |
| <i>Oedipina gracilis</i>          | X | 2  | EN | X |   |   |   |   | 3–710     |
| <i>Oedipina grandis</i>           |   | 2  | LC |   | X | X |   |   | 1810–1950 |
| <i>Oedipina nimaso*</i>           | X | NE | DD |   |   | X |   |   | 1093      |
| <i>Oedipina pacificensis</i>      | X | 2  | LC |   |   |   | X | X | 0–750     |
| <i>Oedipina paucidentata</i>      | X | 3  | CR |   | X |   |   |   | 2286      |
| <i>Oedipina poelzi</i>            | X | 3  | EN |   |   | X | X |   | 775–2050  |
| <i>Oedipina pseudouniformis</i>   | X | 3  | LC | X |   | X |   |   | 19–1253   |
| <i>Oedipina savagei</i>           | X | 3  | LC |   |   | X |   | X | 1260–1400 |
| <i>Oedipina uniformis</i>         | X | 3  | LC | X | X | X | X |   | 750–2150  |

#### Order Gymnophiona 2 [4] (8)

| Caeciliidae [2] (2)           |   |    |    |   |   |   |   |   |           |
|-------------------------------|---|----|----|---|---|---|---|---|-----------|
| <i>Caecilia volceni*</i>      |   | NE | NE | X |   |   |   |   | 50–600    |
| <i>Oscaecilia osae</i>        | X | 3  | DD |   |   |   |   | X | 3–240     |
| Dermophiidae [2] (6)          |   |    |    |   |   |   |   |   |           |
| <i>Dermophis costaricense</i> | X | 3  | DD |   |   | X |   |   | 1000–1300 |
| <i>Dermophis glandulosus</i>  |   | 0  | LC |   | X | X |   | X | 10–1200   |
| <i>Dermophis gracilior</i>    |   | 2  | DD |   | X | X |   | X | 404–2000  |
| <i>Dermophis occidentalis</i> | X | 3  | LC |   |   | X | X | X | 0–1000    |
| <i>Dermophis parviceps</i>    |   | 0  | LC | X |   |   |   |   | 40–1220   |
| <i>Gymnopsis multiplicata</i> |   | 0  | LC | X |   | X | X | X | 1–1400    |

\*New addition.

**Table S4.** List of species that have been screened for *Batrachochytrium dendrobatidis* (Bd) in Costa Rica.

For every species, the table shows the method used for detection of Bd.

| Species                       | Histology | Conventional PCR | qPCR | qPCR Museum Specimens |
|-------------------------------|-----------|------------------|------|-----------------------|
| <i>Agalychnis annae</i>       |           |                  |      | x                     |
| <i>Agalychnis callidryas</i>  |           | x                | x    |                       |
| <i>Agalychnis lemur</i>       | x         |                  | x    | x                     |
| <i>Agalychnis spurrelli</i>   |           |                  | x    |                       |
| <i>Allobates talamancae</i>   |           | x                | x    |                       |
| <i>Atelopus chiriquiensis</i> | x         |                  |      | x                     |

|                                          |   |   |   |   |
|------------------------------------------|---|---|---|---|
| <i>Atelopus senex</i>                    | x |   |   | x |
| <i>Atelopus varius</i>                   | x |   | x | x |
| <i>Boana rosenbergi</i>                  |   |   | x |   |
| <i>Boana rufitela</i>                    |   |   | x |   |
| <i>Bolitoglossa colonnea</i>             |   |   | x |   |
| <i>Cochranella granulosa</i>             |   |   | x |   |
| <i>Craugastor andi</i>                   | x |   |   | x |
| <i>Craugastor angelicus</i>              |   |   |   | x |
| <i>Craugastor bransfordii</i>            |   | x | x |   |
| <i>Craugastor catalinae</i>              |   |   |   | x |
| <i>Craugastor crassidigitus</i>          |   | x | x |   |
| <i>Craugastor escoces</i>                | x |   |   | x |
| <i>Craugastor fitzingeri</i>             |   |   | x |   |
| <i>Craugastor fleischmanni</i>           |   |   |   | x |
| <i>Craugastor gabbi</i>                  |   |   | x |   |
| <i>Craugastor gollmeri</i>               |   | x |   |   |
| <i>Craugastor megacephalus</i>           |   | x | x |   |
| <i>Craugastor melanostictus</i>          | x |   |   | x |
| <i>Craugastor mimus</i>                  |   |   | x |   |
| <i>Craugastor noblei</i>                 |   | x |   |   |
| <i>Craugastor obesus</i>                 |   |   |   | x |
| <i>Craugastor podiciferus</i>            |   |   | x |   |
| <i>Craugastor ranoides</i>               |   |   | x | x |
| <i>Craugastor rhyacobatrachus</i>        |   |   |   | x |
| <i>Craugastor stejnegerianus</i>         |   |   | x |   |
| <i>Craugastor talamancae</i>             | x |   |   |   |
| <i>Craugastor taurus</i>                 |   |   | x | x |
| <i>Craugastor underwoodi</i>             |   |   | x |   |
| <i>Cruziohyla calcarifer</i>             |   |   | x |   |
| <i>Dendrobates auratus</i>               |   | x | x |   |
| <i>Dendropsophus ebraccatus</i>          |   |   | x |   |
| <i>Dendropsophus microcephalus</i>       |   |   | x |   |
| <i>Dendropsophus phlebodes</i>           |   |   | x |   |
| <i>Diasporus diastema</i>                |   | x | x |   |
| <i>Diasporus hylaeformis</i>             | x |   |   |   |
| <i>Diasporus tigrillo</i>                |   |   | x |   |
| <i>Diasporus vocator</i>                 |   |   | x |   |
| <i>Duellmanohyla rufiocularis</i>        | x |   | x | x |
| <i>Duellmanohyla uranochroa</i>          | x |   |   | x |
| <i>Engystomops pustulosus</i>            |   |   | x |   |
| <i>Espadarana prosoblepon</i>            |   |   | x |   |
| <i>Hyalinobatrachium colymbiophyllum</i> |   |   | x |   |
| <i>Hyalinobatrachium fleischmanni</i>    |   |   | x |   |
| <i>Hyalinobatrachium valerioi</i>        |   | x | x |   |
| <i>Hyloscirtus colymba</i>               |   |   |   | x |
| <i>Hyloscirtus palmeri</i>               |   |   | x | x |

|                                     |   |   |   |   |
|-------------------------------------|---|---|---|---|
| <i>Hypopachus variolosus</i>        |   |   | x |   |
| <i>Incilius coccifer</i>            |   |   | x |   |
| <i>Incilius coniferus</i>           |   | x | x |   |
| <i>Incilius fastidiosus</i>         | x |   |   | x |
| <i>Incilius holdridgei</i>          |   |   | x | x |
| <i>Incilius luetkenii</i>           |   |   | x |   |
| <i>Incilius melanochlorus</i>       |   |   | x |   |
| <i>Incilius periglenes</i>          |   |   |   | x |
| <i>Isthmohyla angustilineata</i>    | x |   |   | x |
| <i>Isthmohyla calypsa</i>           | x |   |   | x |
| <i>Isthmohyla pictipes</i>          |   |   |   | x |
| <i>Isthmohyla pseudopuma</i>        | x |   | x |   |
| <i>Isthmohyla rivularis</i>         | x |   |   | x |
| <i>Isthmohyla tica</i>              |   |   |   | x |
| <i>Isthmohyla xanthosticta</i>      |   |   |   | x |
| <i>Leptodactylus fragilis</i>       |   |   | x |   |
| <i>Leptodactylus insularum</i>      |   |   | x |   |
| <i>Leptodactylus melanonotus</i>    |   |   | x |   |
| <i>Leptodactylus poecilochilus</i>  |   |   | x |   |
| <i>Leptodactylus savagei</i>        |   | x | x |   |
| <i>Lithobates forreri</i>           |   |   | x |   |
| <i>Lithobates taylori</i>           |   |   | x |   |
| <i>Lithobates vaillanti</i>         |   |   | x |   |
| <i>Lithobates vibicarius</i>        |   |   | x | x |
| <i>Lithobates warszewitschii</i>    |   | x | x | x |
| <i>Oedipina gracilis</i>            |   |   | x |   |
| <i>Oophaga granulifera</i>          |   |   | x |   |
| <i>Oophaga pumilio</i>              |   | x | x |   |
| <i>Phyllobates lugubris</i>         |   | x |   |   |
| <i>Pristimantis altae</i>           |   |   | x |   |
| <i>Pristimantis caryophyllaceus</i> | x |   |   | x |
| <i>Pristimantis cerasinus</i>       |   | x | x |   |
| <i>Pristimantis cruentus</i>        |   |   | x |   |
| <i>Pristimantis ridens</i>          |   |   | x |   |
| <i>Ptychohyla legleri</i>           |   |   | x | x |
| <i>Rhaebo haematiticus</i>          |   |   | x |   |
| <i>Rhinella horribilis</i>          |   | x | x |   |
| <i>Sachatamia ilex</i>              |   |   | x |   |
| <i>Scinax boulengeri</i>            |   |   | x |   |
| <i>Scinax elaeochroa</i>            |   |   | x |   |
| <i>Scinax staufferi</i>             |   |   | x |   |
| <i>Silverstoneia flotator</i>       |   | x |   |   |
| <i>Silverstoneia nubicola</i>       |   |   |   | x |
| <i>Smilisca baudinii</i>            |   |   | x |   |
| <i>Smilisca manisorum</i>           |   | x | x |   |
| <i>Smilisca phaeota</i>             | x | x |   |   |

|                                 |   |   |   |
|---------------------------------|---|---|---|
| <i>Smilisca sila</i>            |   |   | x |
| <i>Smilisca sordida</i>         | x | x |   |
| <i>Teratohyla pulverata</i>     |   |   | x |
| <i>Teratohyla spinosa</i>       |   |   | x |
| <i>Tlalocohyla loquax</i>       |   |   | x |
| <i>Trachycephalus typhonius</i> |   |   | x |
| <i>Tripriion spinosus</i>       |   |   | x |

**Table S5.** List of species where *Batrachochytrium dendrobatidis* was surveyed in Costa Rica in our combined dataset. For every species, the table shows the positive number of samples (total sample size) and the overall percentage of infection (with 95% binomial CI).

| Species                            | Positives (n sampled) | Percentage of Infection (95% CI) |
|------------------------------------|-----------------------|----------------------------------|
| <i>Agalychnis callidryas</i>       | 4 (20)                | 20 (6–44)                        |
| <i>Agalychnis lemur</i>            | (0) 5                 | 0 (0–52)                         |
| <i>Agalychnis spurrelli</i>        | 5 (12)                | 42 (15–72)                       |
| <i>Allobates talamancae</i>        | 0 (14)                | 0 (0–23)                         |
| <i>Boana rosenbergi</i>            | 0 (1)                 | 0 (0–98)                         |
| <i>Boana rufitela</i>              | 8 (12)                | 67 (35–90)                       |
| <i>Bolitoglossa colonnea</i>       | 1 (1)                 | 100 (25–100)                     |
| <i>Cochranella granulosa</i>       | 1 (7)                 | 14 (0–58)                        |
| <i>Cochranella spinosa</i>         | 0 (2)                 | 0 (0–84)                         |
| <i>Craugastor bransfordi</i>       | 24 (107)              | 22 (15–32)                       |
| <i>Craugastor crassidigitus</i>    | 8 (56)                | 14 (6–26)                        |
| <i>Craugastor fitzingeri</i>       | 51 (176)              | 29 (22–36)                       |
| <i>Craugastor gabbi</i>            | 0 (2)                 | 0 (0–84)                         |
| <i>Craugastor gollmeri</i>         | 0 (1)                 | 0 (0–98)                         |
| <i>Craugastor megacephalus</i>     | 1 (19)                | 5 (0–26)                         |
| <i>Craugastor mimus</i>            | 9 (12)                | 75 (43–95)                       |
| <i>Craugastor noblei</i>           | 1 (2)                 | 50 (1–99)                        |
| <i>Craugastor podiciferus</i>      | 0 (3)                 | 0 (0–70)                         |
| <i>Craugastor ranoides</i>         | 3 (116)               | 3 (1–7)                          |
| <i>Craugastor stejnegerianus</i>   | 2 (6)                 | 33 (4–78)                        |
| <i>Craugastor taurus</i>           | 12 (24)               | 50 (29–71)                       |
| <i>Craugastor underwoodi</i>       | 2 (2)                 | 1 (16–100)                       |
| <i>Cruziohyla calcarifer</i>       | 1 (1)                 | 1 (25–100)                       |
| <i>Dendrobates auratus</i>         | 1 (16)                | 6 (0–30)                         |
| <i>Dendropsophus ebraccatus</i>    | 38 (81)               | 47 (36–58)                       |
| <i>Dendropsophus microcephalus</i> | 0 (7)                 | 0 (0–41)                         |
| <i>Dendropsophus phlebodes</i>     | 0 (1)                 | 0 (0–98)                         |
| <i>Diasporus diastema</i>          | 3 (31)                | 10 (2–26)                        |
| <i>Diasporus tigrillo</i>          | 0 (5)                 | 0 (0–52)                         |
| <i>Diasporus vocator</i>           | 0 (1)                 | 0 (0–98)                         |

|                                         |         |              |
|-----------------------------------------|---------|--------------|
| <i>Duellmanohyla rufiocolis</i>         | 2 (7)   | 29 (37–71)   |
| <i>Engystomops pustulosus</i>           | 11 (46) | 24 (13–39)   |
| <i>Espadarana prosoblepon</i>           | 5 (15)  | 33 (12–62)   |
| <i>Hyalinobatrachium colymbiphyllum</i> | 1 (4)   | 25 (1–91)    |
| <i>Hyalinobatrachium fleischmanni</i>   | 0 (2)   | 0 (0–84)     |
| <i>Hyalinobatrachium valerioi</i>       | 4 (30)  | 13 (3–31)    |
| <i>Hyloscirtus palmeri</i>              | 1 (1)   | 100 (25–100) |
| <i>Hypopachus variolosus</i>            | 0 (9)   | 0 (0–34)     |
| <i>Incilius coccifer</i>                | 0 (29)  | 0 (0–12)     |
| <i>Incilius coniferus</i>               | 0 (8)   | 0 (0–37)     |
| <i>Incilius luetkenii</i>               | 0 (12)  | 0 (0–26)     |
| <i>Incilius melanochlorus</i>           | 2 (8)   | 25 (3–65)    |
| <i>Isthmohyla pseudopuma</i>            | 1 (12)  | 8 (0–38)     |
| <i>Leptodactylus fragilis</i>           | 0 (1)   | 0 (0–98)     |
| <i>Leptodactylus insularum</i>          | 0 (4)   | 0 (0–60)     |
| <i>Leptodactylus melanonotus</i>        | 4 (23)  | 17 (5–38)    |
| <i>Leptodactylus poecilochilus</i>      | 1 (35)  | 3 (0–15)     |
| <i>Leptodactylus savagei</i>            | 2 (28)  | 7 (0–24)     |
| <i>Lithobates forreri</i>               | 2 (30)  | 7 (1–22)     |
| <i>Lithobates taylori</i>               | 16 (21) | 76 (53–92)   |
| <i>Lithobates vaillanti</i>             | 0 (5)   | 0 (0–52)     |
| <i>Lithobates warszewitschii</i>        | 15 (41) | 52 (32–71)   |
| <i>Oedipina gracilis</i>                | 0 (1)   | 0 (0–98)     |
| <i>Oophaga granulifera</i>              | 9 (11)  | 82 (48–98)   |
| <i>Oophaga pumilio</i>                  | 35 (80) | 44 (33–55)   |
| <i>Phyllobates lugubris</i>             | 1 (4)   | 25 (1–91)    |
| <i>Pristimantis altae</i>               | 0 (2)   | 0 (0–84)     |
| <i>Pristimantis cerasinus</i>           | 9 (26)  | 35 (17–56)   |
| <i>Pristimantis cruentus</i>            | 0 (11)  | 0 (0–29)     |
| <i>Pristimantis ridens</i>              | 7 (27)  | 26 (11–46)   |
| <i>Ptychohyla legleri</i>               | 0 (1)   | 0 (0–98)     |
| <i>Rhaebo haematiticus</i>              | 22 (51) | 43 (29–0.58) |
| <i>Rhinella horribilis</i>              | 0 (90)  | 0 (0–4)      |
| <i>Sachatamia ilex</i>                  | 0 (2)   | 0 (0–84)     |
| <i>Scinax boulengeri</i>                | 1 (6)   | 17 (0–64)    |
| <i>Scinax elaeochroa</i>                | 5 (39)  | 13 (4–27)    |
| <i>Scinax staufferi</i>                 | 0 (3)   | 0 (0–70)     |
| <i>Silverstoneia flotator</i>           | 0 (15)  | 0 (0–22)     |
| <i>Smilisca baudinii</i>                | 0 (31)  | 0 (0–11)     |
| <i>Smilisca manisorum</i>               | 0 (2)   | 0 (0–84)     |
| <i>Smilisca phaeota</i>                 | 4 (18)  | 22 (6–48)    |

|                                 |            |              |
|---------------------------------|------------|--------------|
| <i>Smilisca sila</i>            | 0 (10)     | 0 (0–31)     |
| <i>Smilisca sordida</i>         | 50 (133)   | 38 (29–46)   |
| <i>Teratohyla pulverata</i>     | 2 (26)     | 7 (1–25)     |
| <i>Teratohyla spinosa</i>       | 5 (17)     | 29 (10–56)   |
| <i>Tlalocohyla loquax</i>       | 11 (16)    | 69 (41–89)   |
| <i>Trachycephalus typhonius</i> | 0 (13)     | 0 (0–25)     |
| <i>Tripurion spinosus</i>       | 1 (1)      | 100 (25–100) |
| Total                           | 404 (1750) | 23 (21–25)   |

**Table S6.** Candidacy generalized linear models (GLMs) and linear models (LMs) used to determine the best predictors of prevalence and infection intensity of *Batrachochytrium dendrobatidis* in amphibian assemblages from Costa Rica. Predictors were species, herpetological province (region), Holdridge's altitudinal belt (elevation), and the foraging-reproduction habitat index (FRHI). The most robust GLMs were selected according to the Akaike Information Criteria (AIC). For LMs, ANOVA was used to test significance of predictors.

| Predictors                | Evaluation                               | Significant Predictors ( $p < 0.05$ ) |
|---------------------------|------------------------------------------|---------------------------------------|
| GLMs                      | AIC                                      |                                       |
| Region + FRHI + Elevation | 1701                                     | Region, FRHI                          |
| Region + FRHI             | 1700*                                    | Region, FRHI                          |
| LM                        | (ANOVA)                                  |                                       |
| Region + FRHI + Elevation | ( $F_{11,339} = 7.44, p < 0.01, k = 3$ ) | FRHI                                  |
| Region + FRHI             | ( $F_{11,339} = 7.44, p < 0.01, k = 2$ ) | FRHI                                  |
| FRHI                      | ( $F_{8,342} = 7.91, p < 0.01, k = 1$ )* | FRHI                                  |

\*Selected models.

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