**Table S1.** Families and character sources used to build the species keys

|  |  |
| --- | --- |
| **Taxon** | **Character Source** |
| Anomalepididae | Dixon and Konfron (1983) and Marra-Santos et al. (2023) |
| Leptotyphlopidae | Passos et al. (2005), Adalsteinsson et al. (2009) and Hedges (2011) |
| Typhlopidae | Dixon and Hendriks (1979) and Graboski et al. (2022) |
| Boidae | Henderson (1997), Passos and Fernandes (2008), Gonzalez et al. (2024) |
| Colubridae | Albuquerque (2008), Amaral (1929), Azevedo et al. (2024), Costa et al. (2013), Dixon et al. (1993), Entiauspe-Neto et al. (2020), Jadin et al. (2020), Marques and Sazima (2003), Montingelli et al. (2019), Sudré et al. 2024, Wuster et al. (2001), Cunha and Nascimento (1993), Hamdan and Lira-da-Silva (2012), Hoogmoed et al. (1997), Peters and Orejas-Miranda (1970) and Vanzolini (1980) |
| Dipsadidae | Abegg et al. (2016), Abegg et al. (2022), Bernardo et al. (2012), Bezerra et al. (2020), Costa et al. (2016), Curcio et al. (2015), Di Bernardo (1992), Di Bernardo (1996), Dixon (1989), Entiauspe-Neto et al. (2017), Fernandes et al. (2010), Franco (1994), Franco et al. (1997), Franco and Ferreira (2002), Franco et al. (2003), Franco et al. (2017), Gomes et al. (2020), Hamdan and Lira-da-Silva (2012), Harvey and Muñoz (2004), Hoogmoed et al. (1997), Hoogmoed et al. (2019), Cunha and Nascimento (1993), Kawashita-Ribeiro et al. (2013), Martins et al. (2019), Mebert et al. (2020), Miranda and Fernandes (2012), Missassi and Prudente (2015), Myers (1982), Peters and Orejas-Miranda (1970), Prado (1943), Thomas (1976), Thomas and Dixon (1977), Passos et al. (2004), Passos et al. (2010), Passos et al. (2012), Santos et al. (2008), Schöneberg and Köhler (2022), Sheehy et al. (2014), Torres-Carvajal et al. (2012), Trevine et al. (2022), Vanzolini (1980), Zaher (1996) and Zaher et al. (2008) |
| Elapidae | Campbell and Lamar (2004), Duque et al. (2023) and Nascimento et al. (2024) |
| Tropidophiidae | Curcio et al. (2012) |
| Viperidae | Klauber (1956), Campbell and Lamar (2004), Barbo et al. (2022), Duque et al. (2023), Hamdan et al. (2024) |