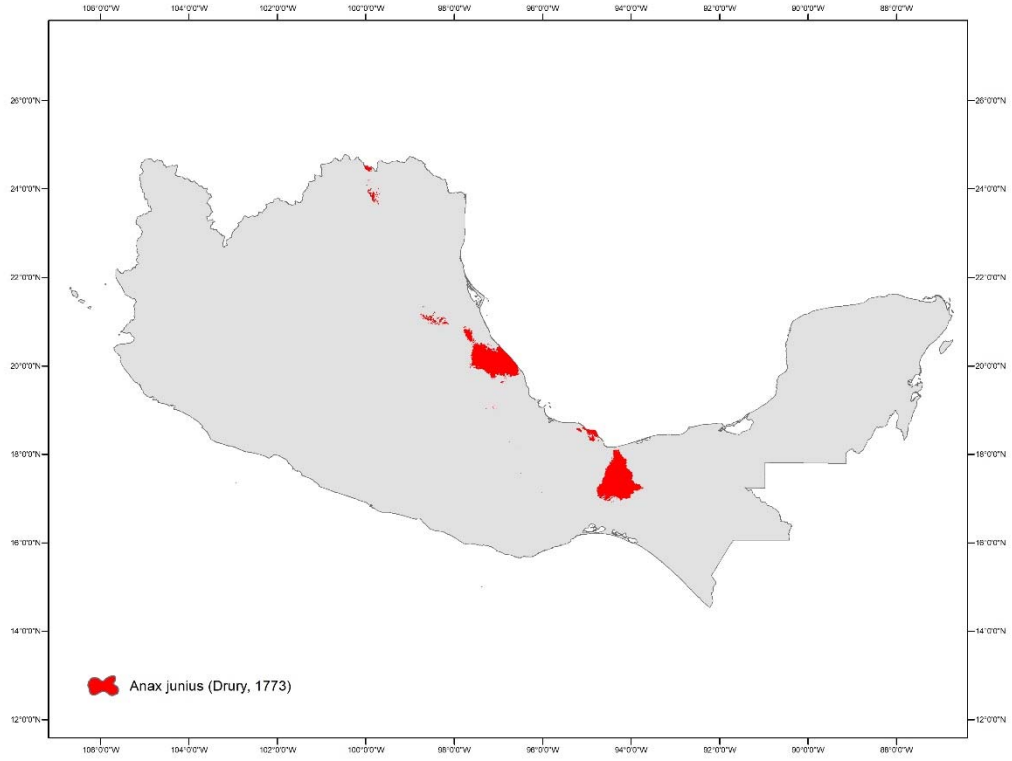
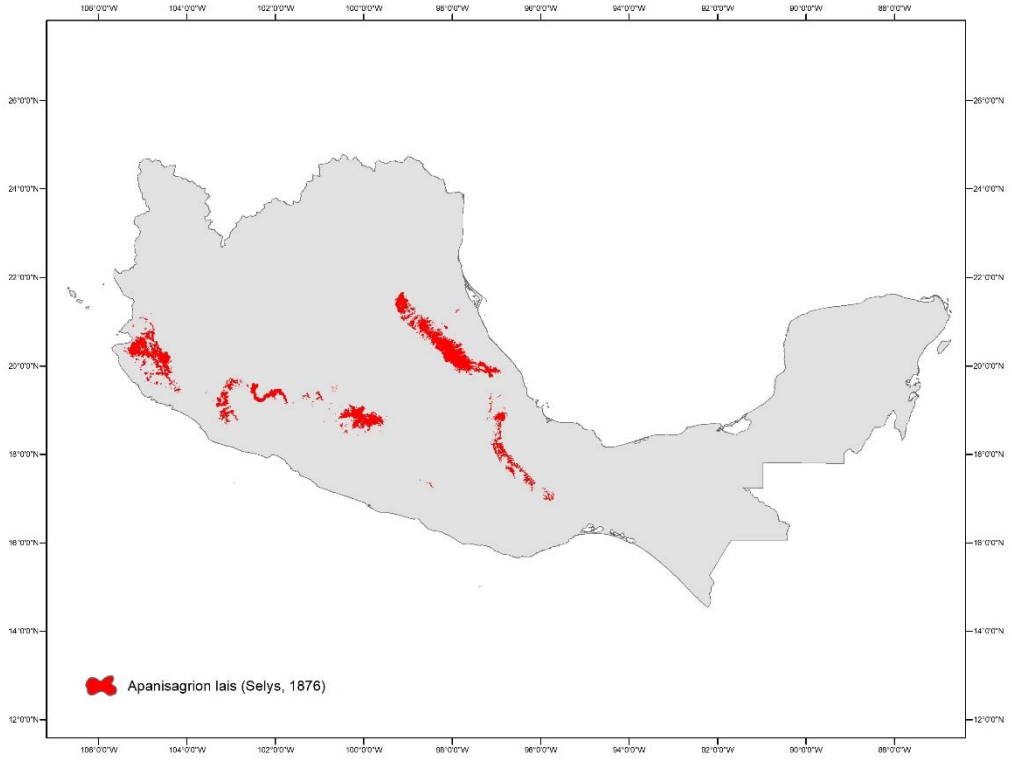
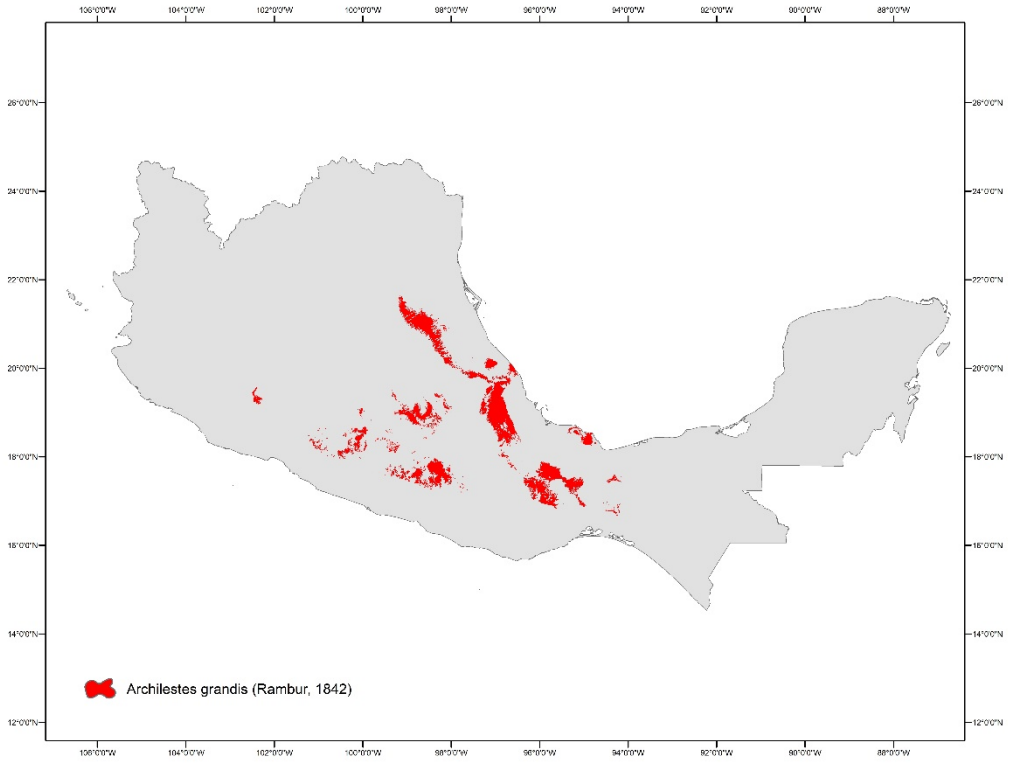
Supplementary material for: Rodríguez-Tapia et al. 2022: Linking potential habitats of Odonata (Insecta) with changes in land use/land cover in Mexico — *Eur. J. Entomol.* **119**: 272–284.

Fig. S1. Niche models of the 49 species used in this study (see also Rodríguez-Tapia et al., 2020).



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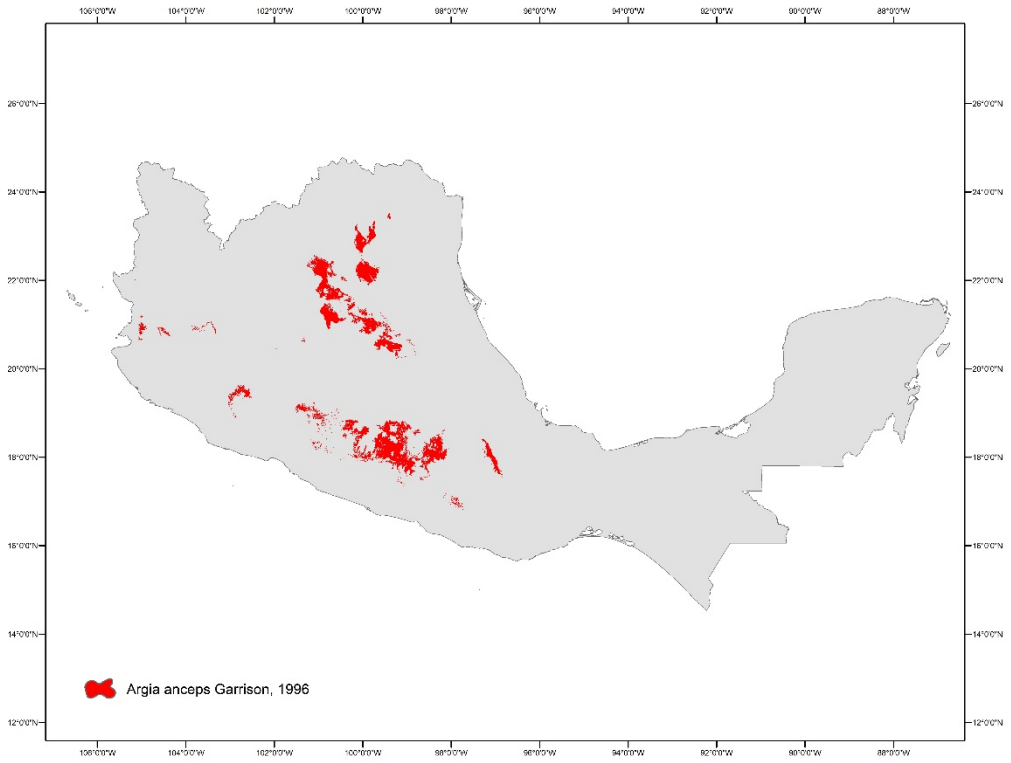
Archilestes grandis (Rambur, 1842)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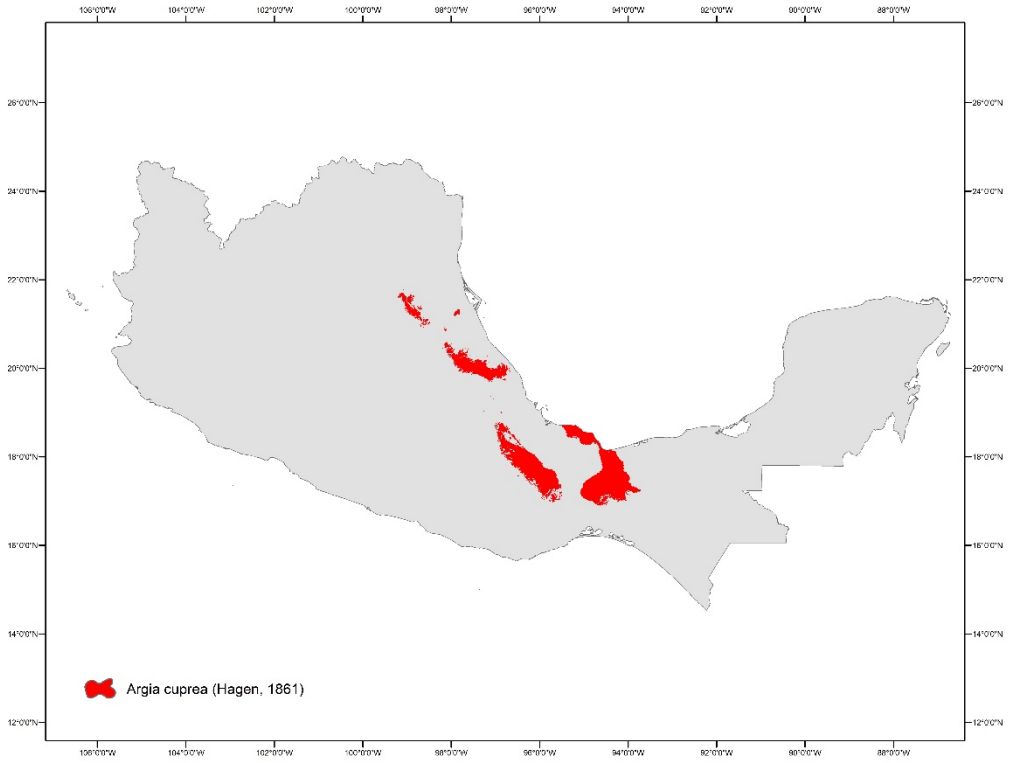
Argia anceps Garrison, 1996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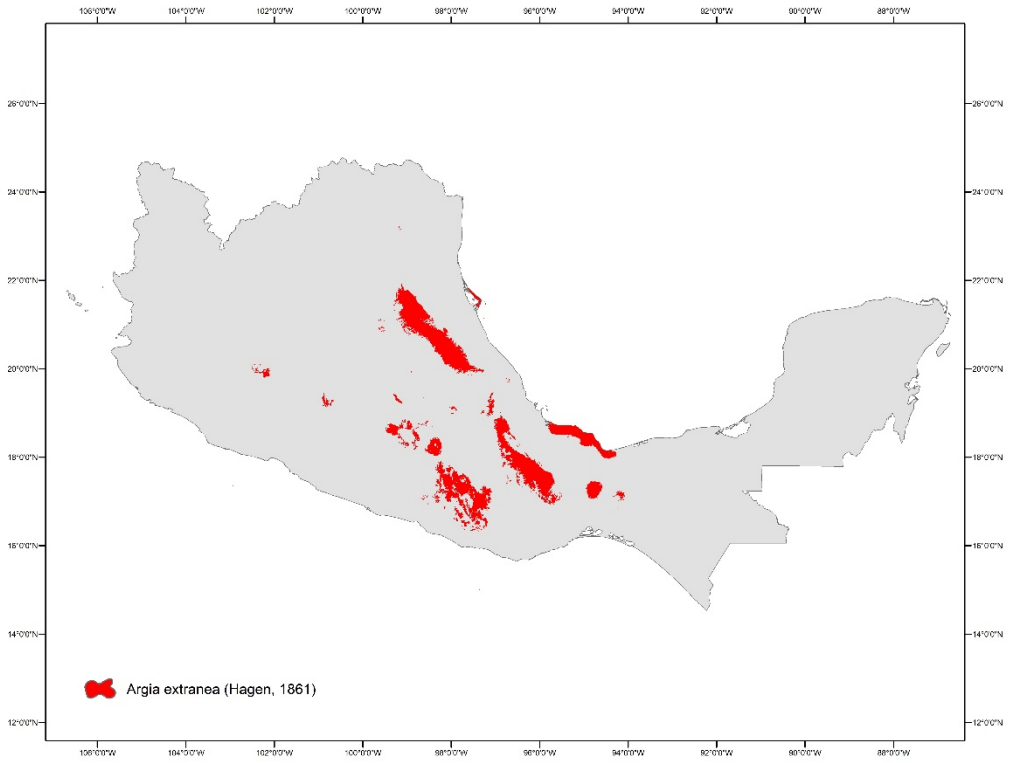
Argia cuprea (Hagen, 1861)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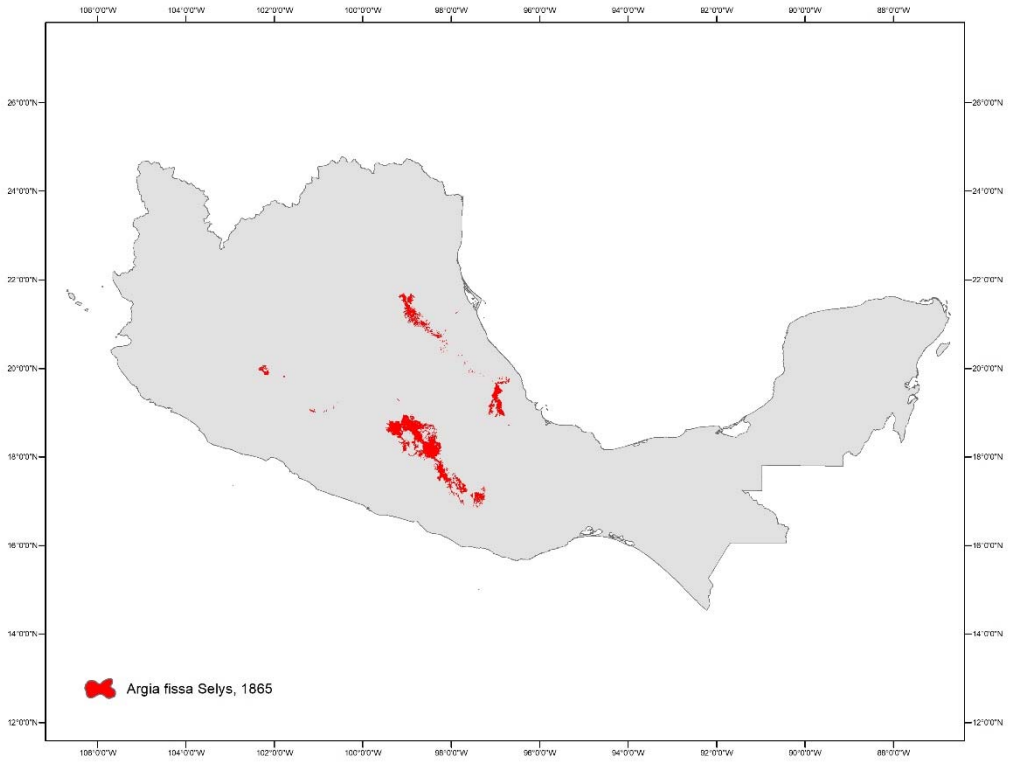
Argia extranea (Hagen, 1861)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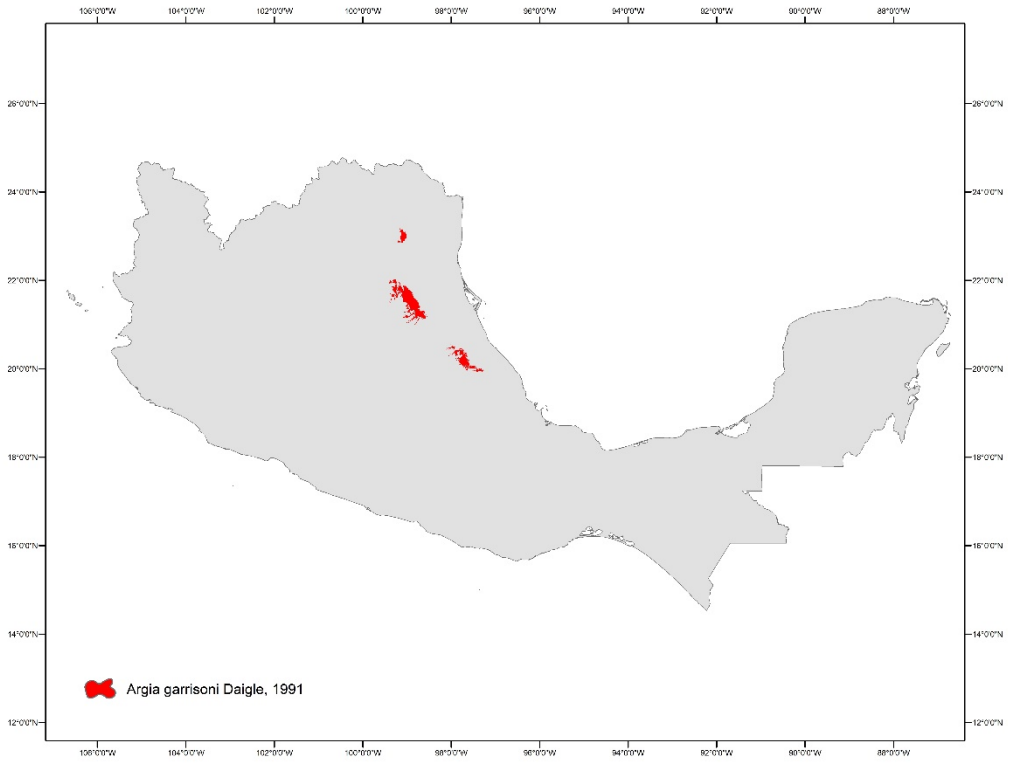
Argia fissa Selys, 1865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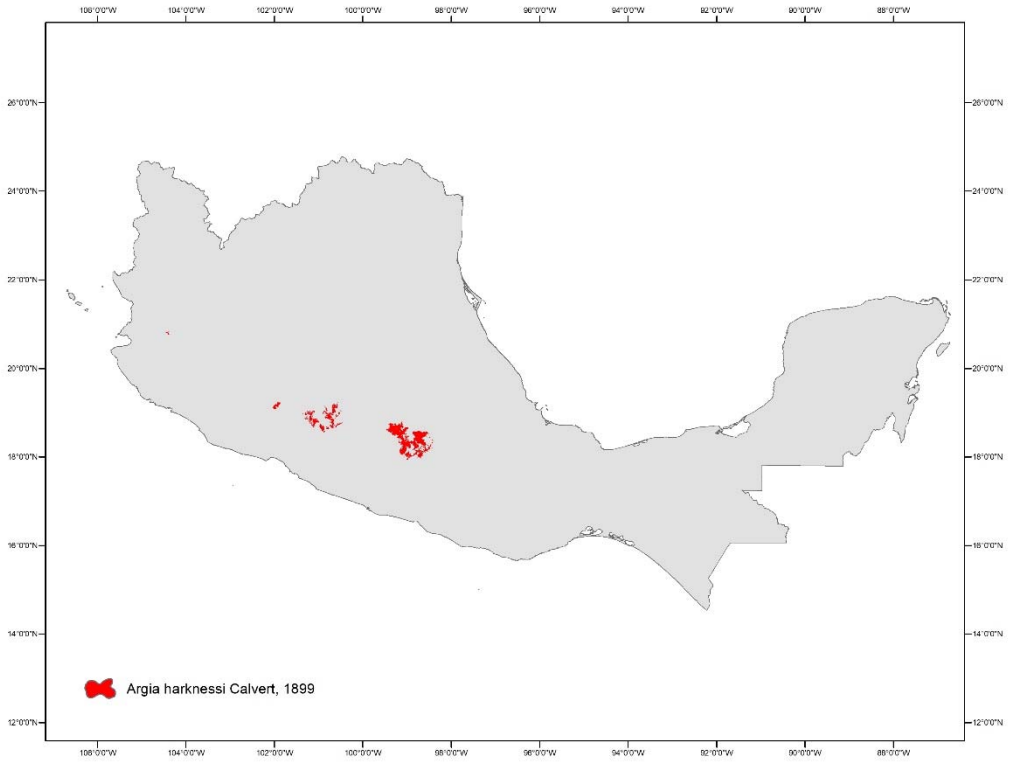
Argia garrisoni Daigle, 1991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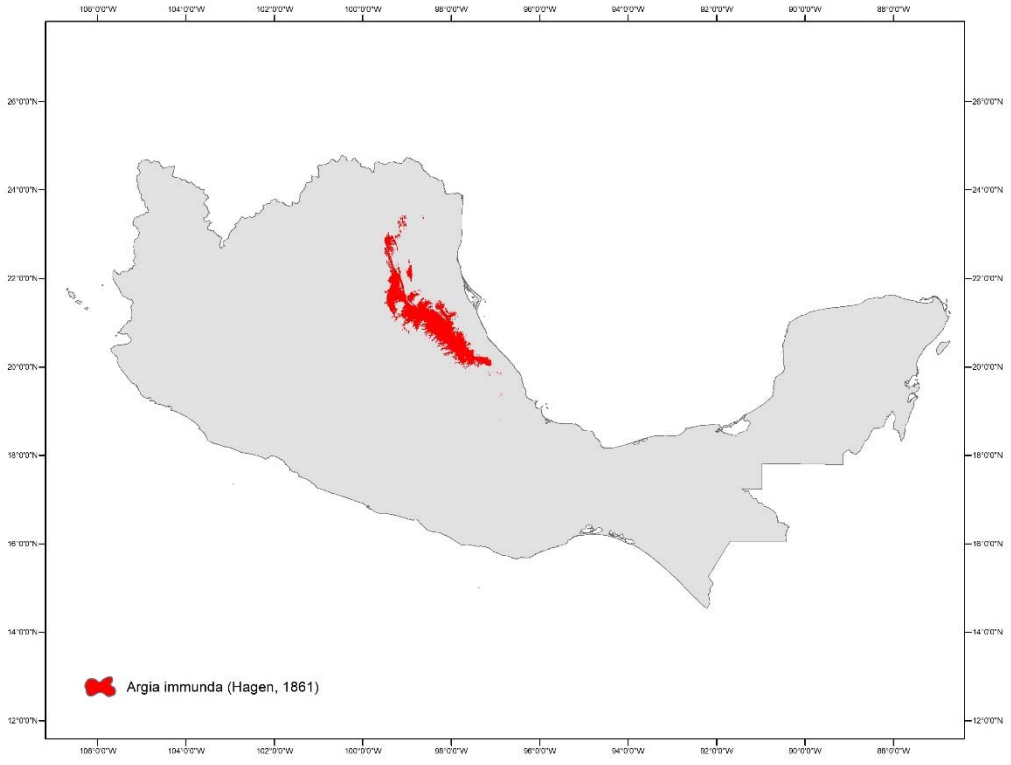
Argia harknessi Calvert, 1899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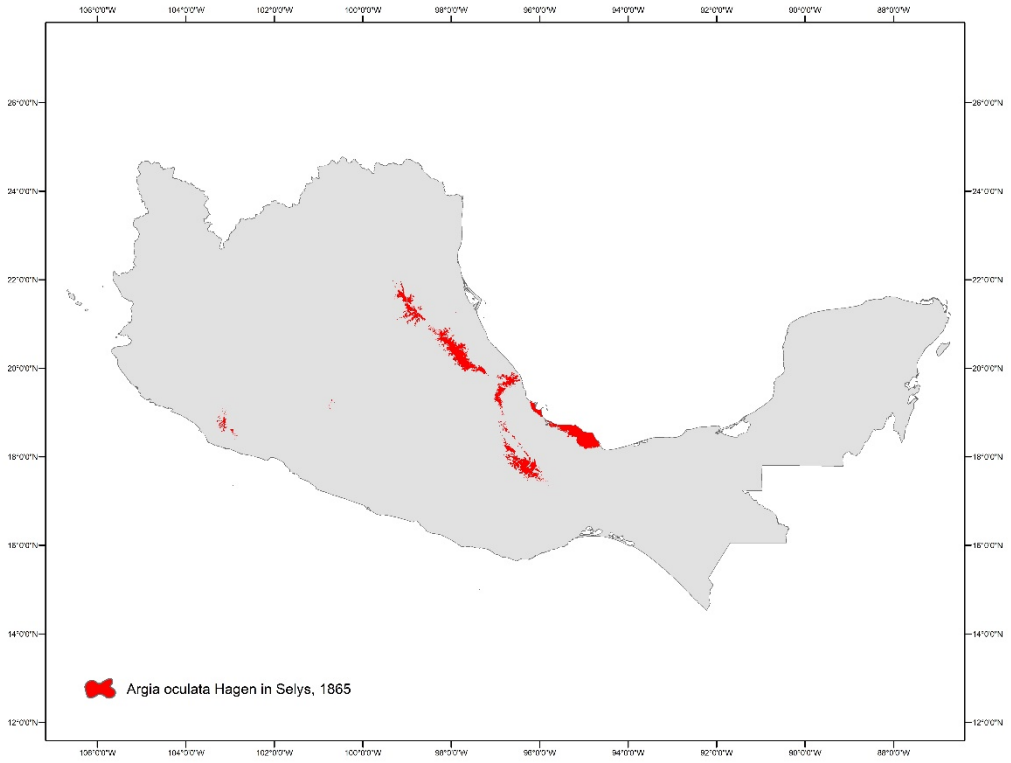
Argia immunda (Hagen, 1861)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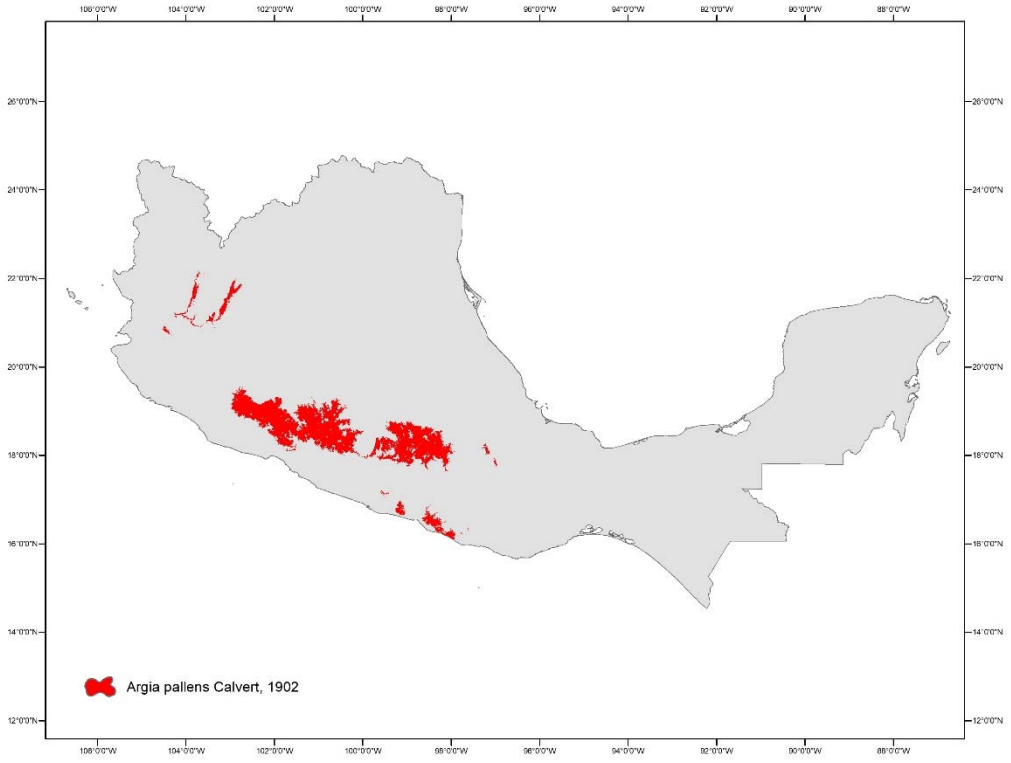
Argia oculata Hagen in Selys, 1865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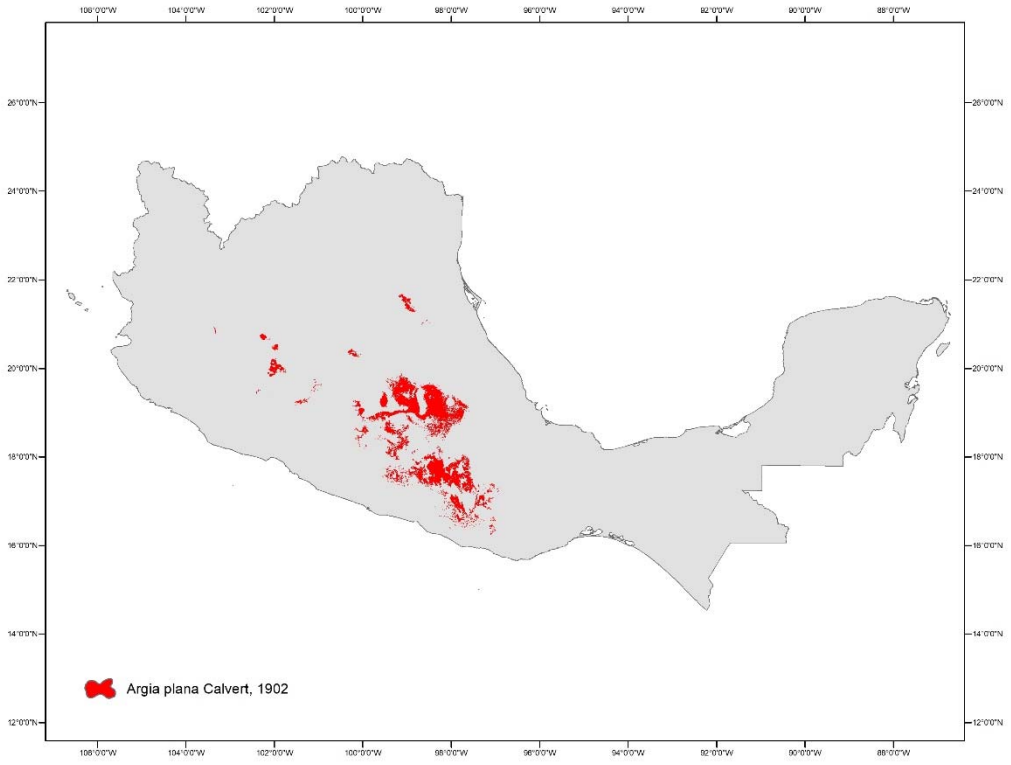
Argia pallens Calvert, 1902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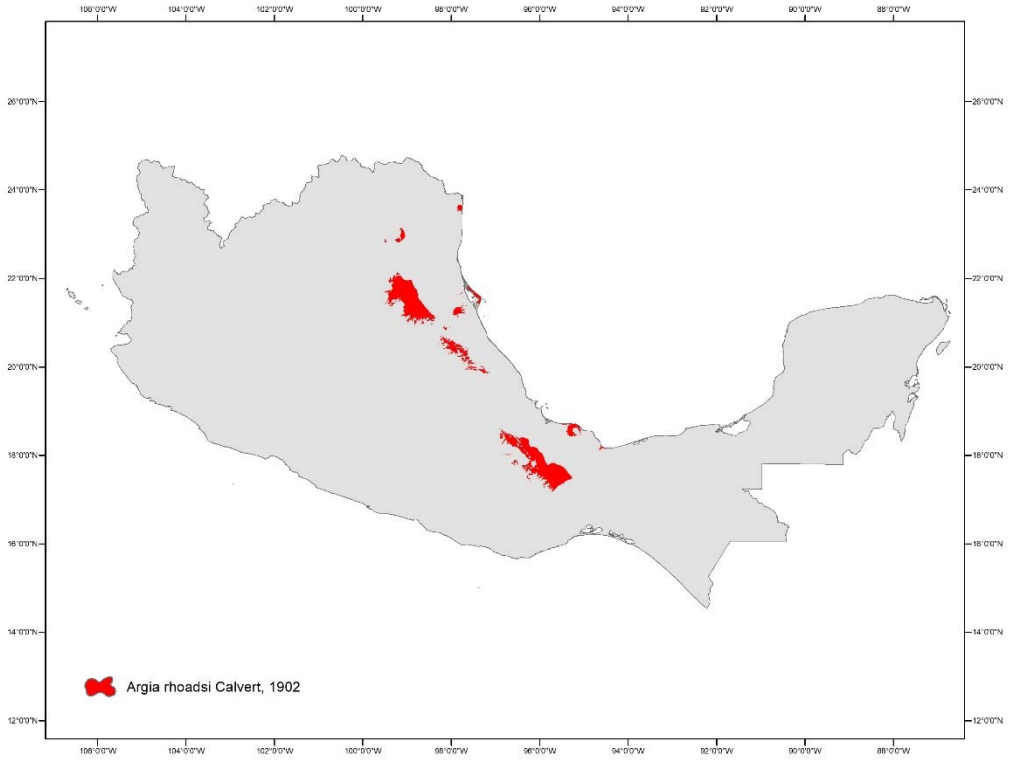
Argia plana Calvert, 1902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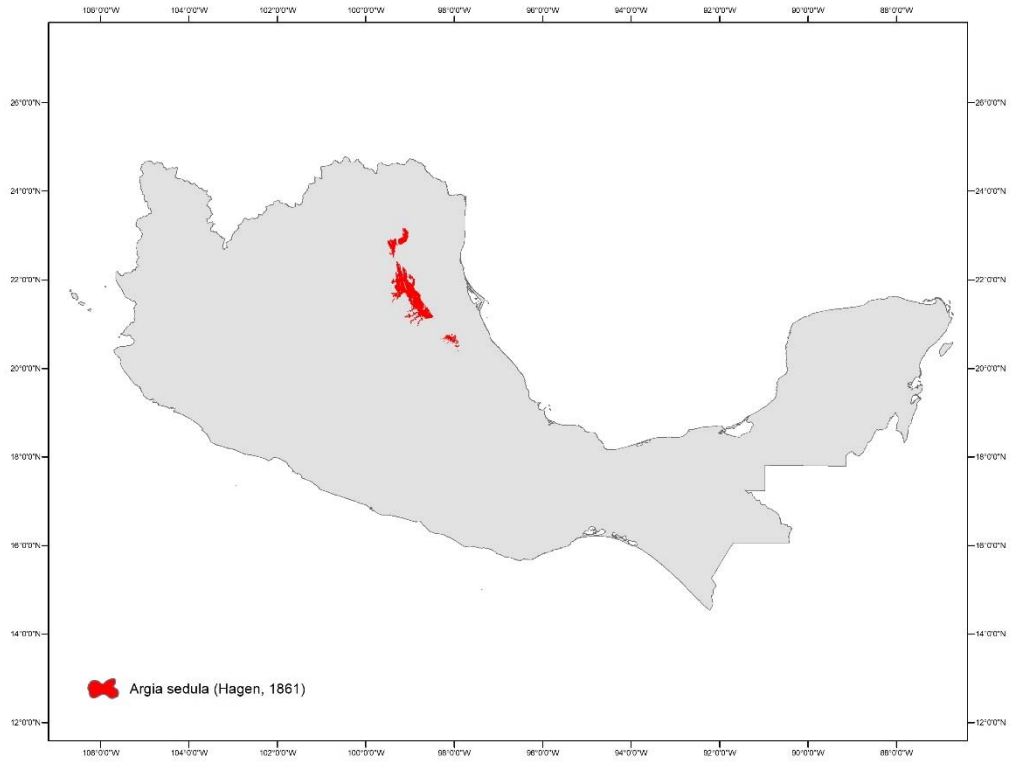
Argia rhoadsi Calvert, 1902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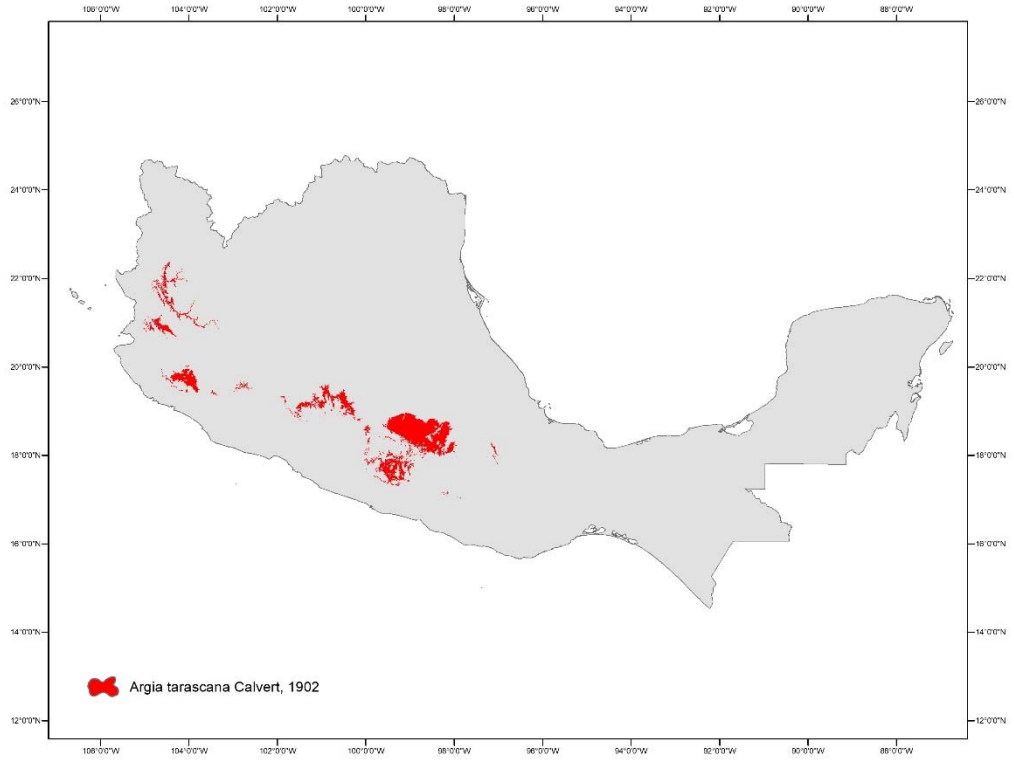
Argia sedula (Hagen, 1861)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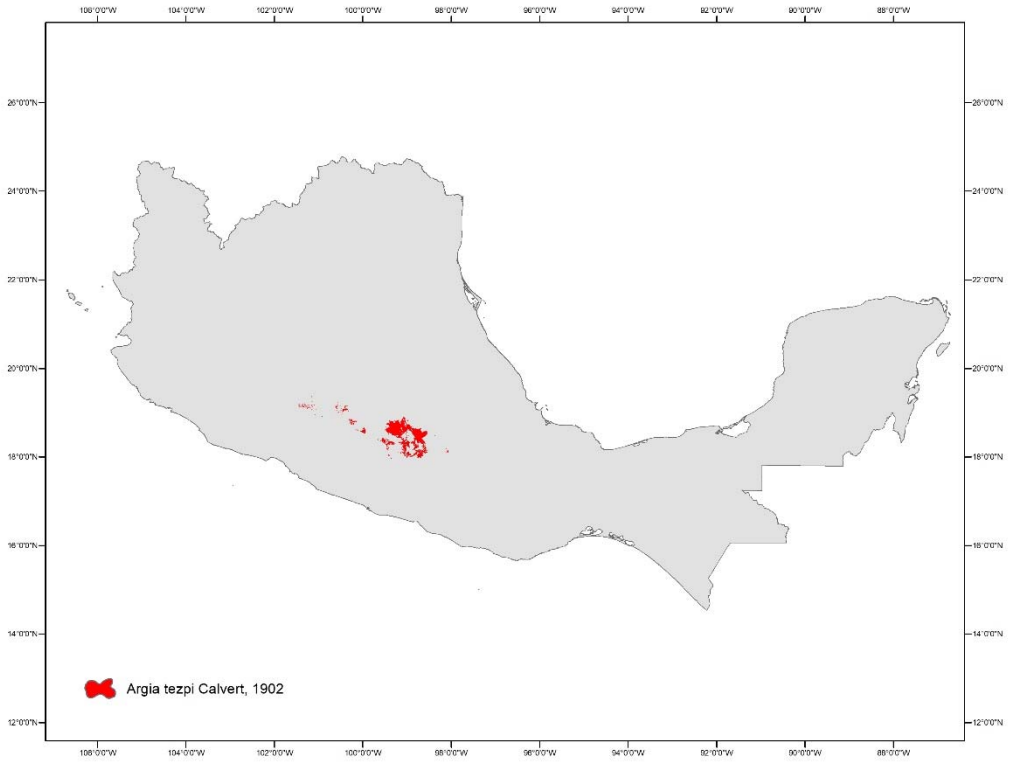
Argia tarascana Calvert, 1902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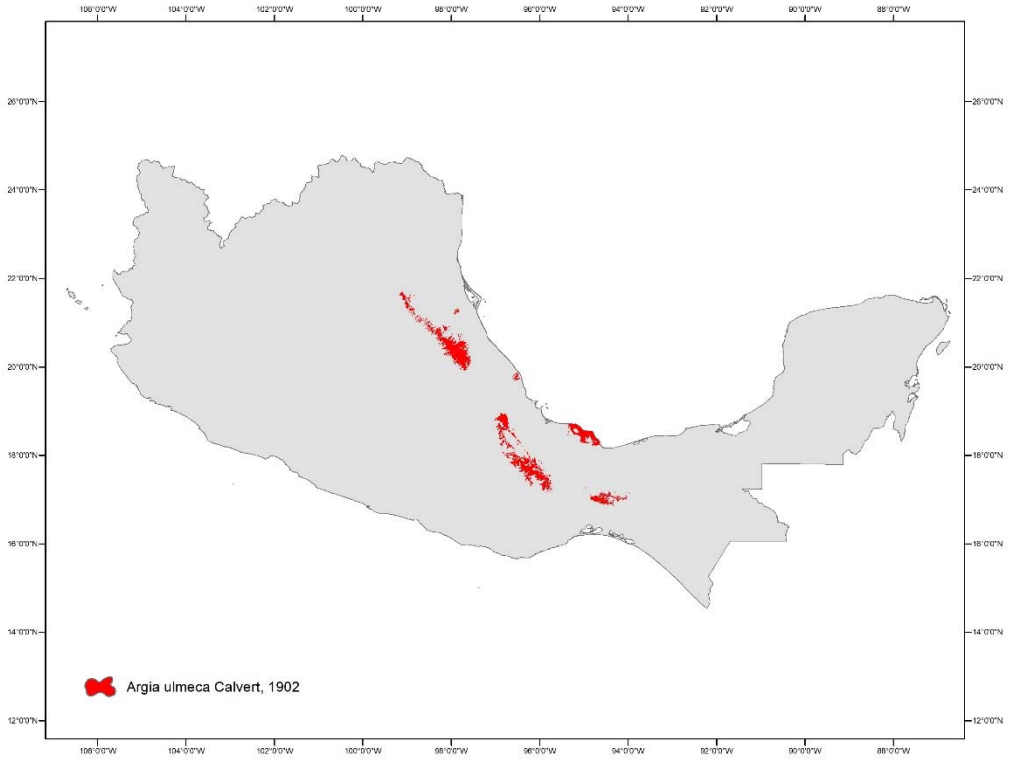
Argia tezpi Calvert, 1902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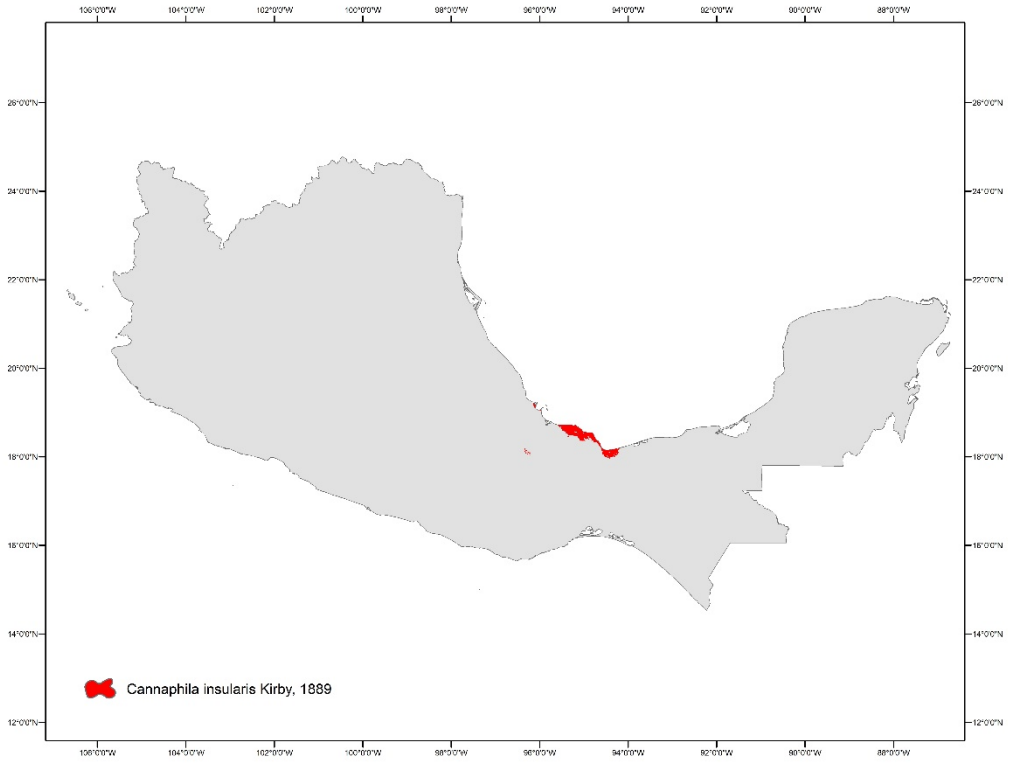
Argia ulmeca Calvert, 1902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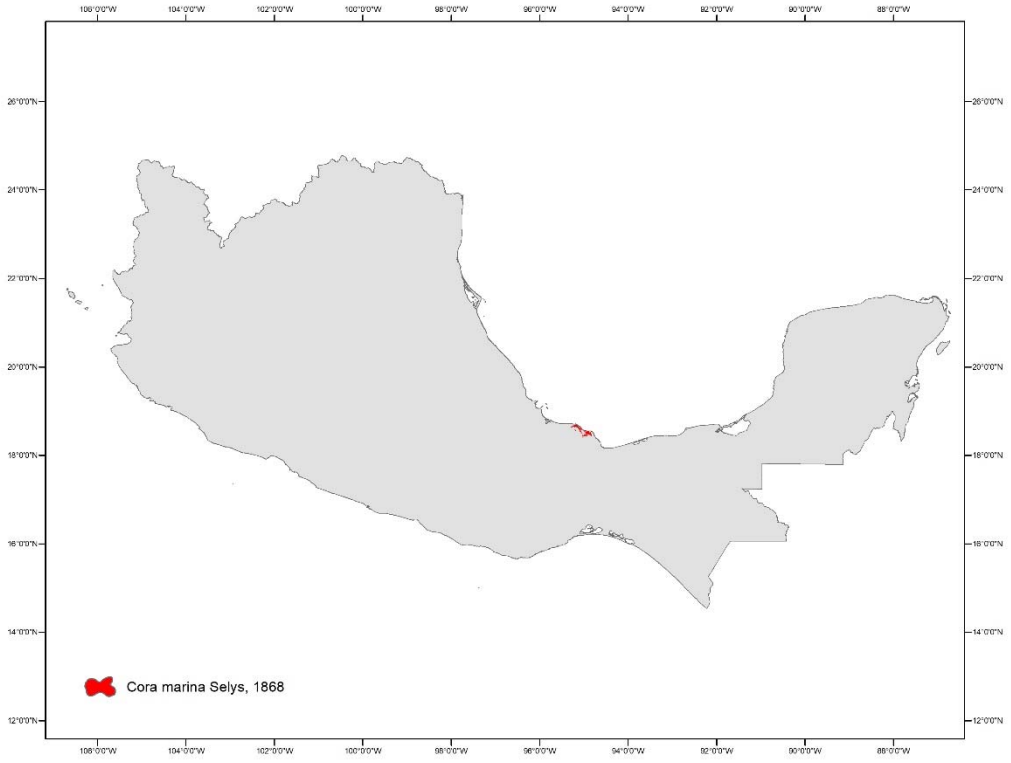
Cannaphila insularis Kirby, 1889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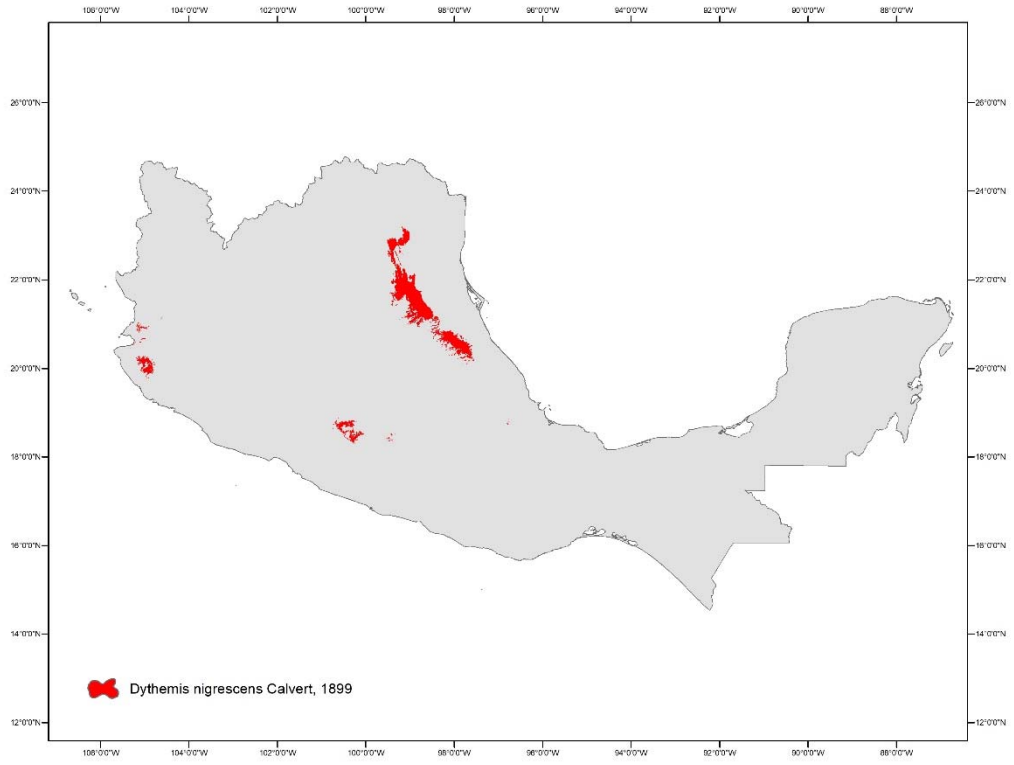
Cora marina Selys, 1868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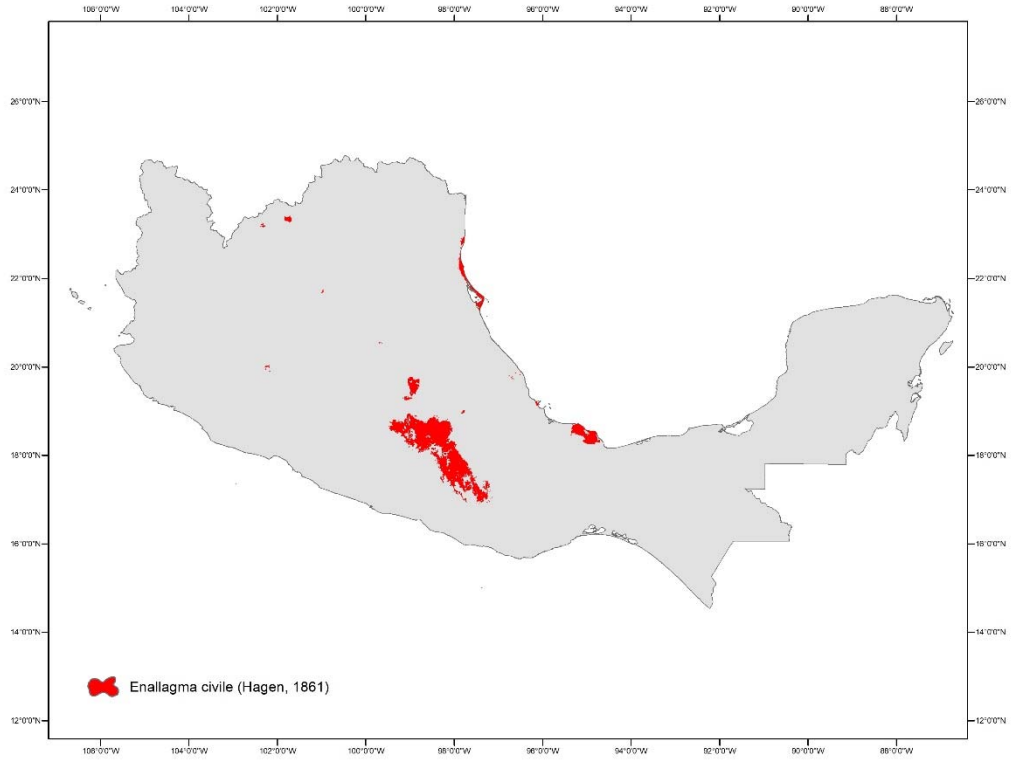
Dythemis nigrescens Calvert, 1899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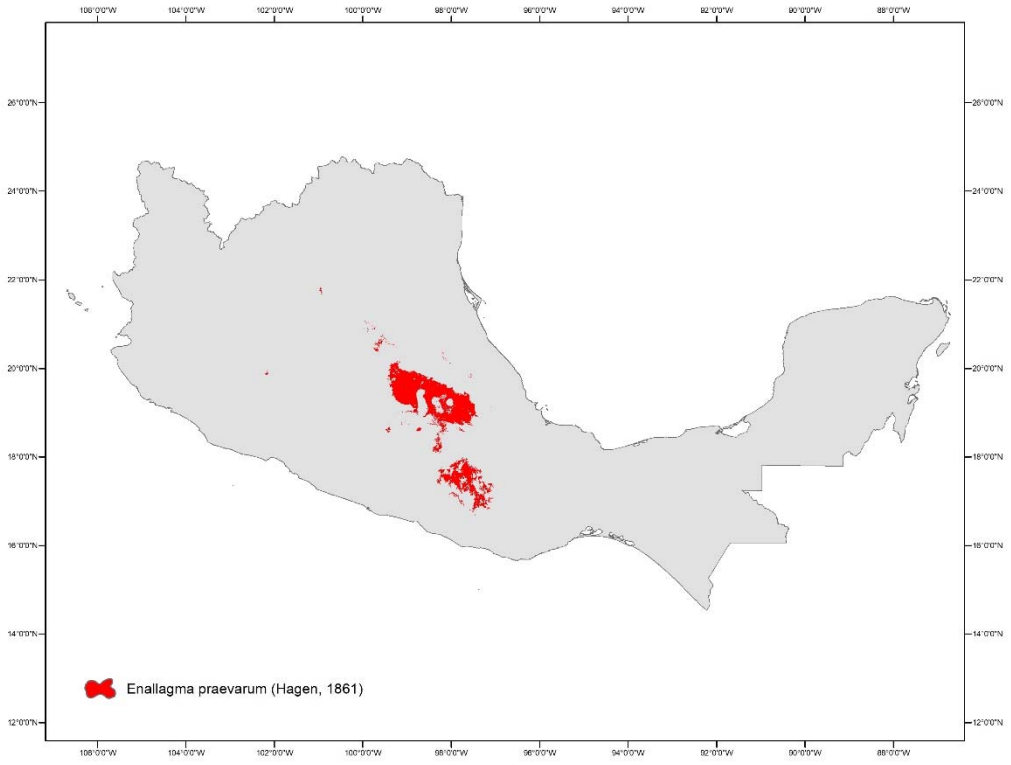
Enallagma civile (Hagen, 1861)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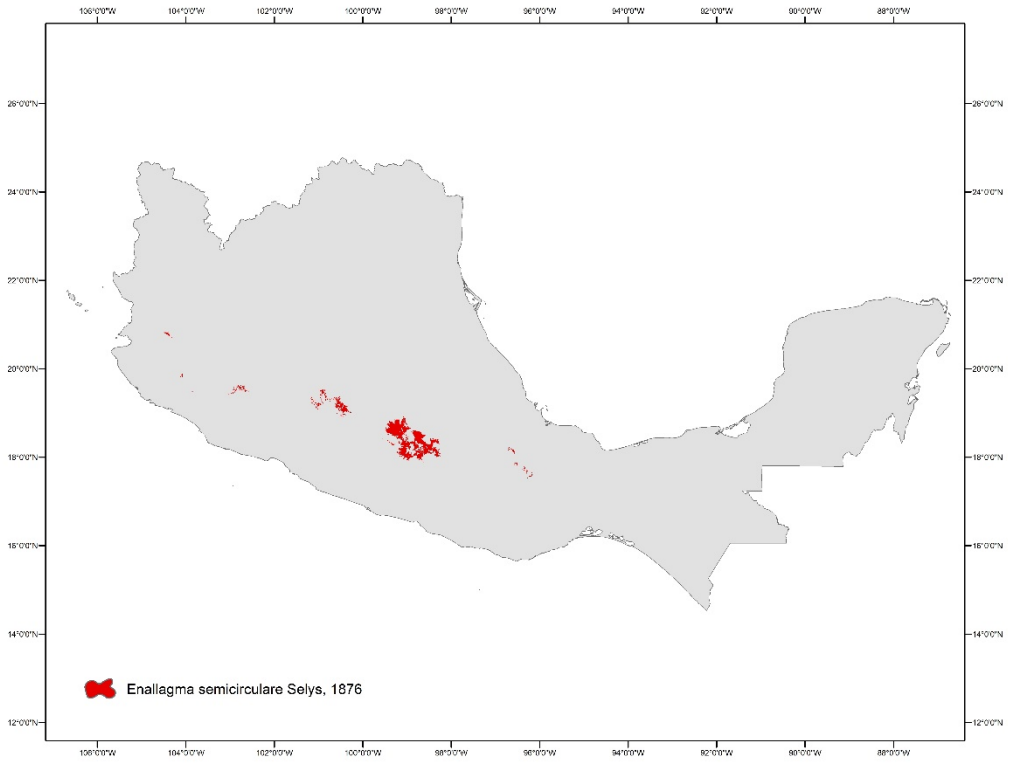
Enallagma praevarum (Hagen, 1861)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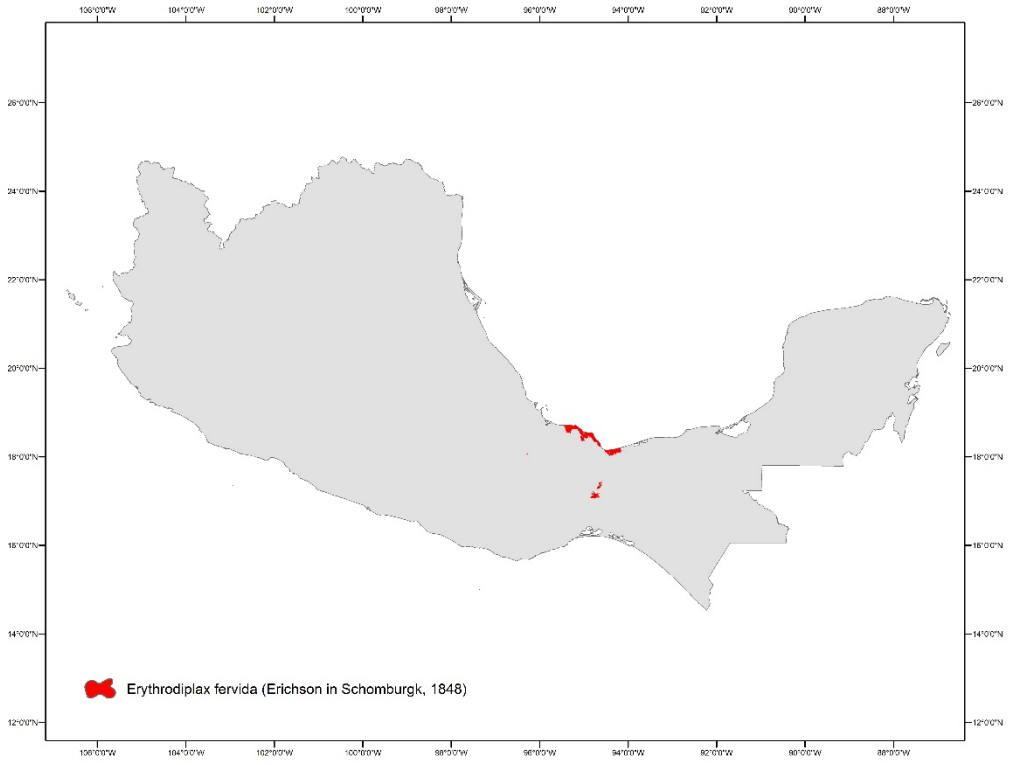
Enallagma semicirculare Selys, 1876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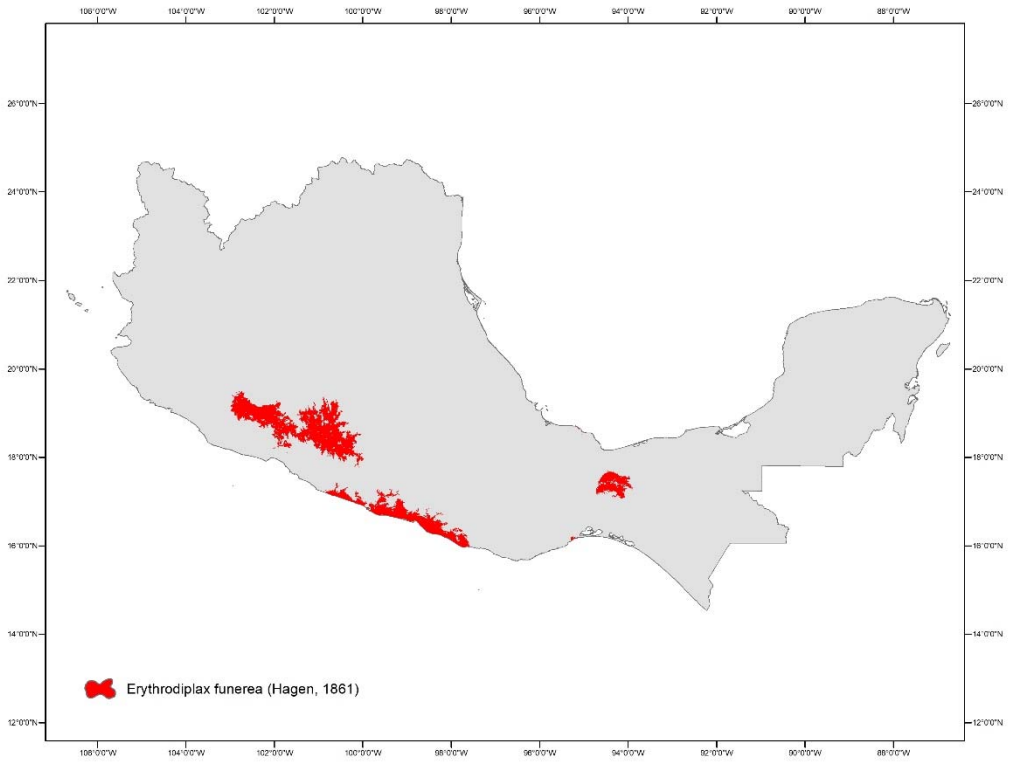
Erythrodiplax fervida (Erichson in Schomburgk, 1848)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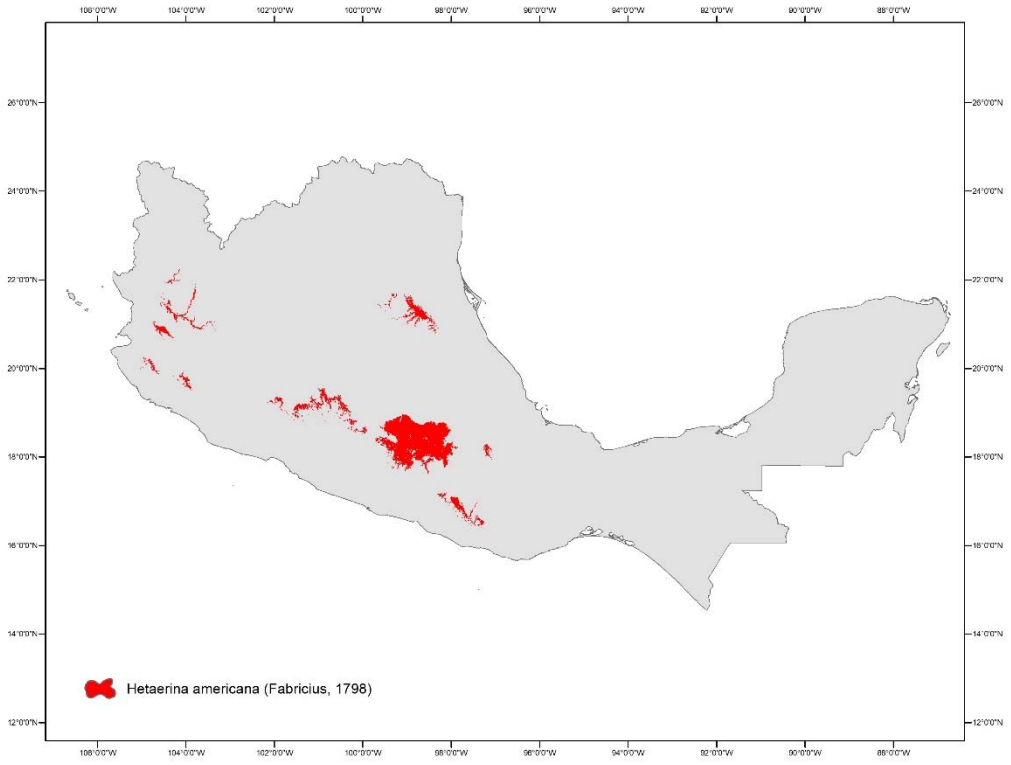
Erythrodiplax funerea (Hagen, 1861)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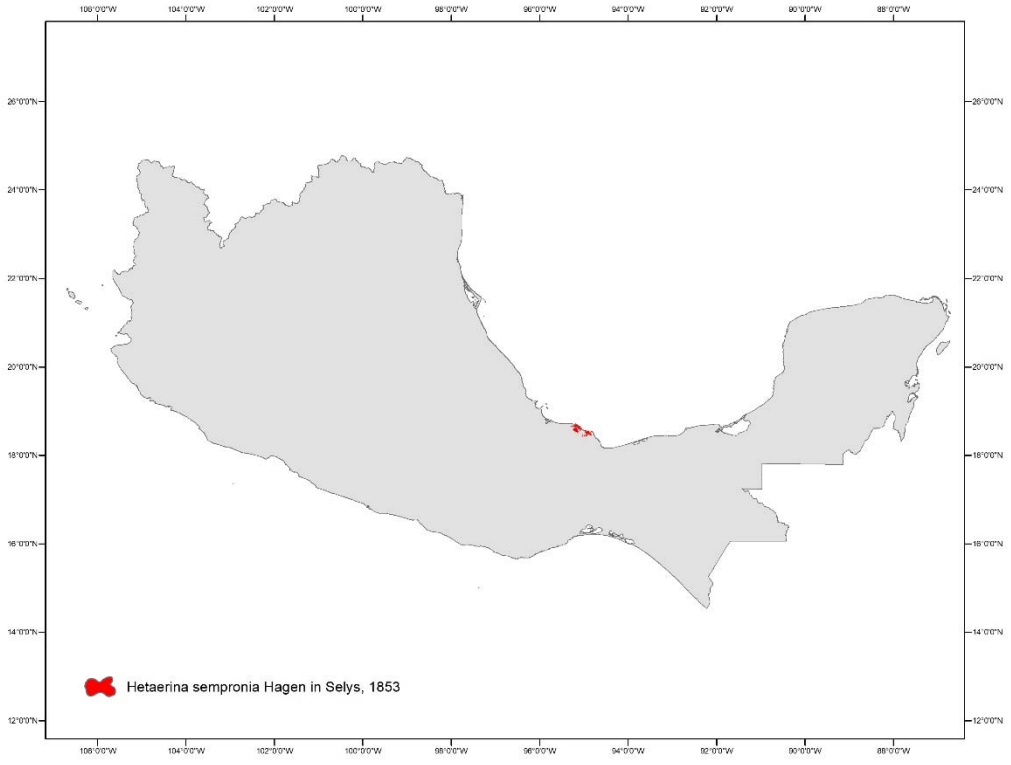
Hetaerina americana (Fabricius, 1798)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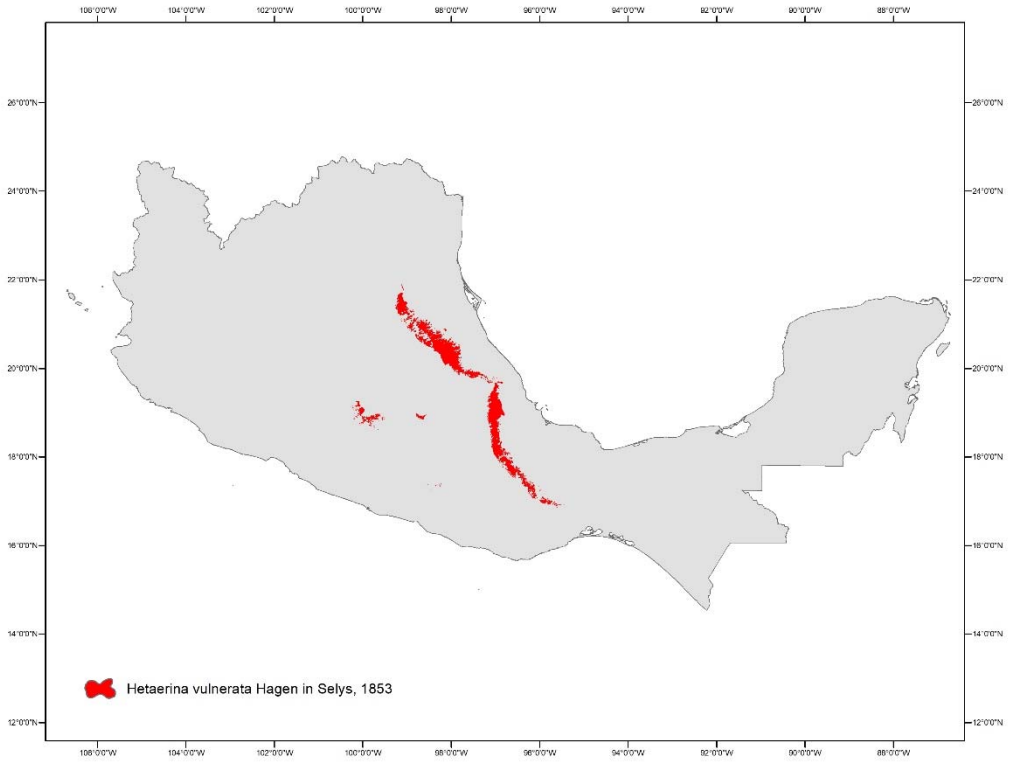
Hetaerina sempronia Hagen in Selys, 1853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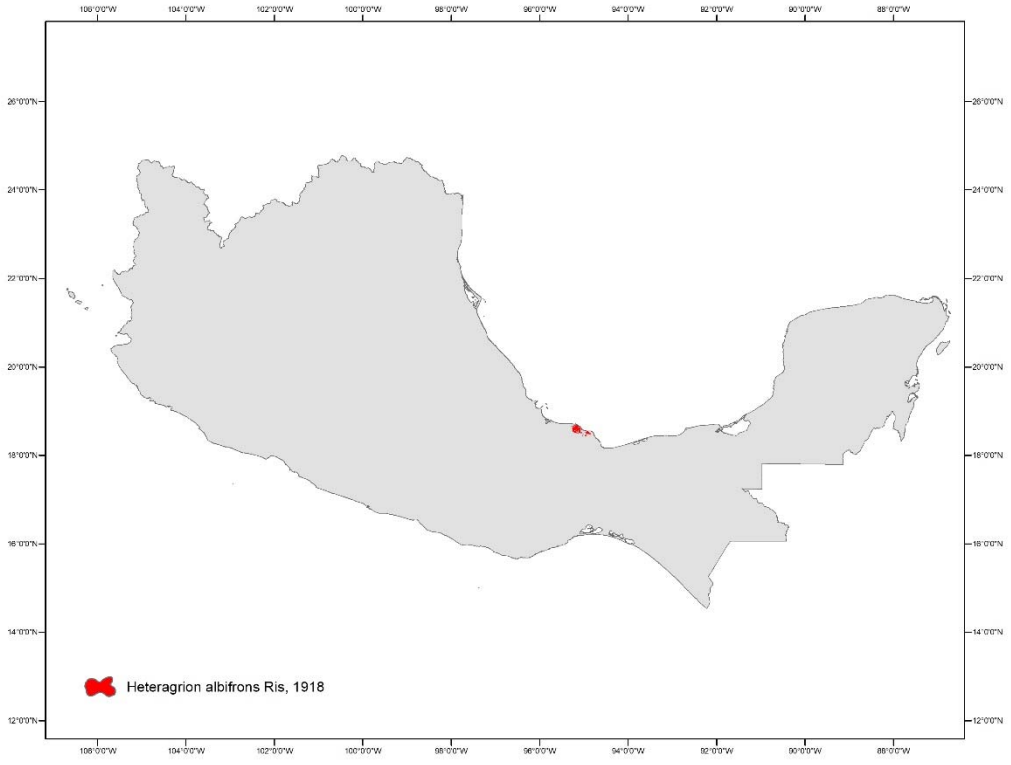
Hetaerina vulnerata Hagen in Selys, 1853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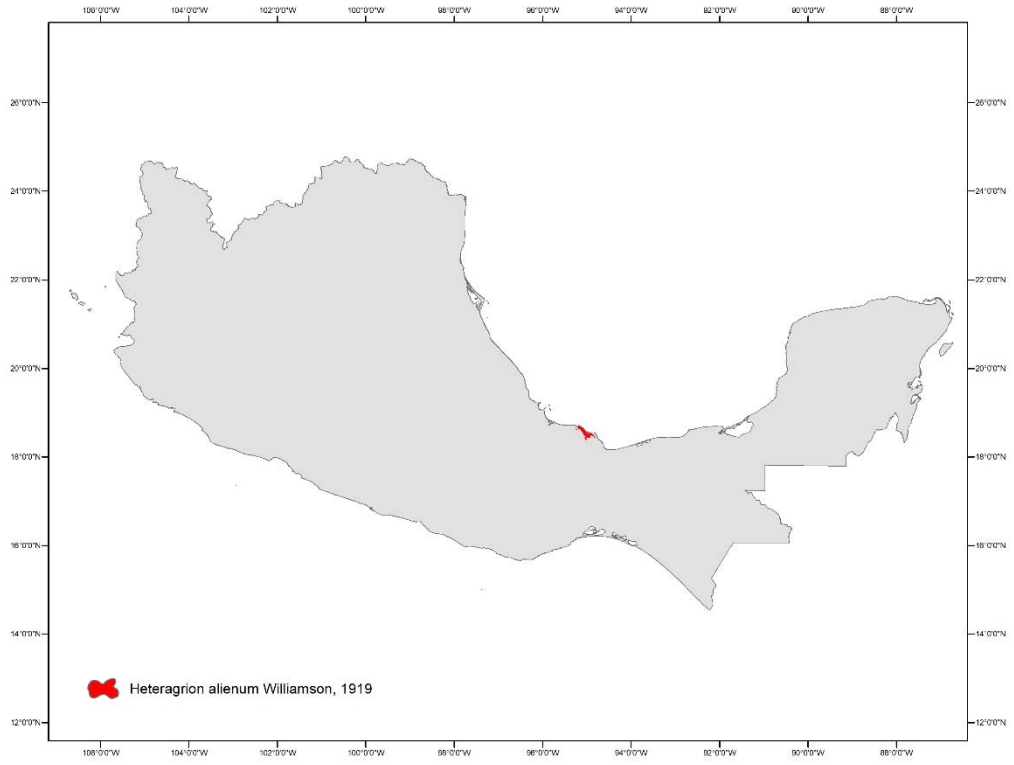
Heteragrion albifrons Ris, 1918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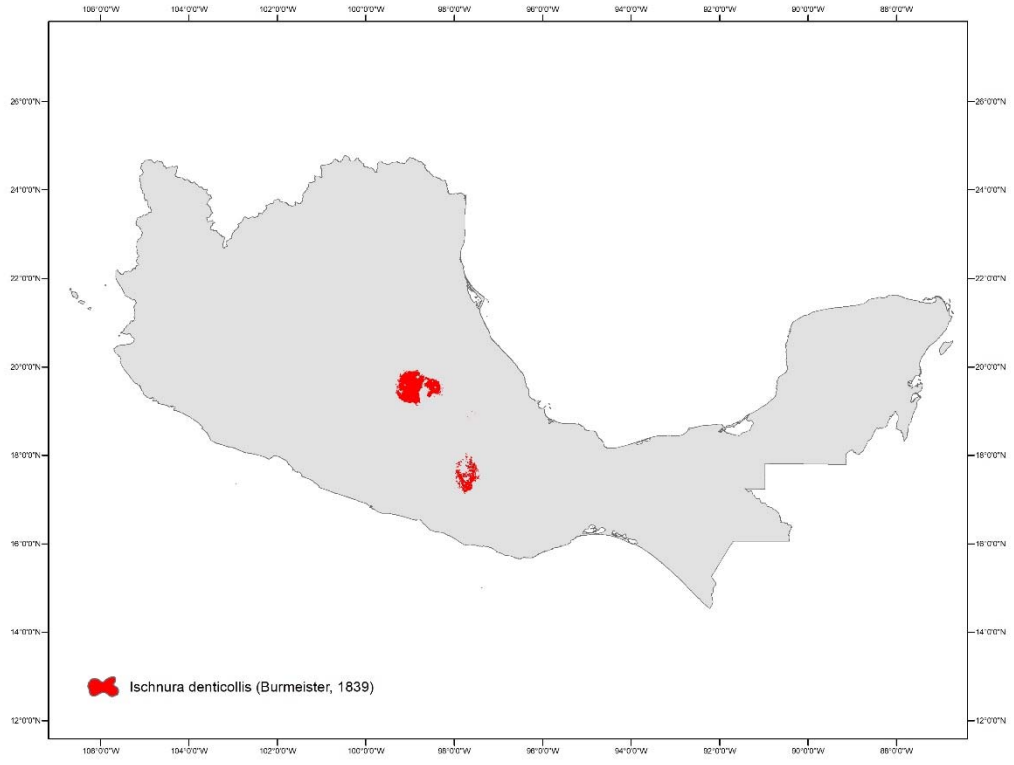
Heteragrion alienum Williamson, 1919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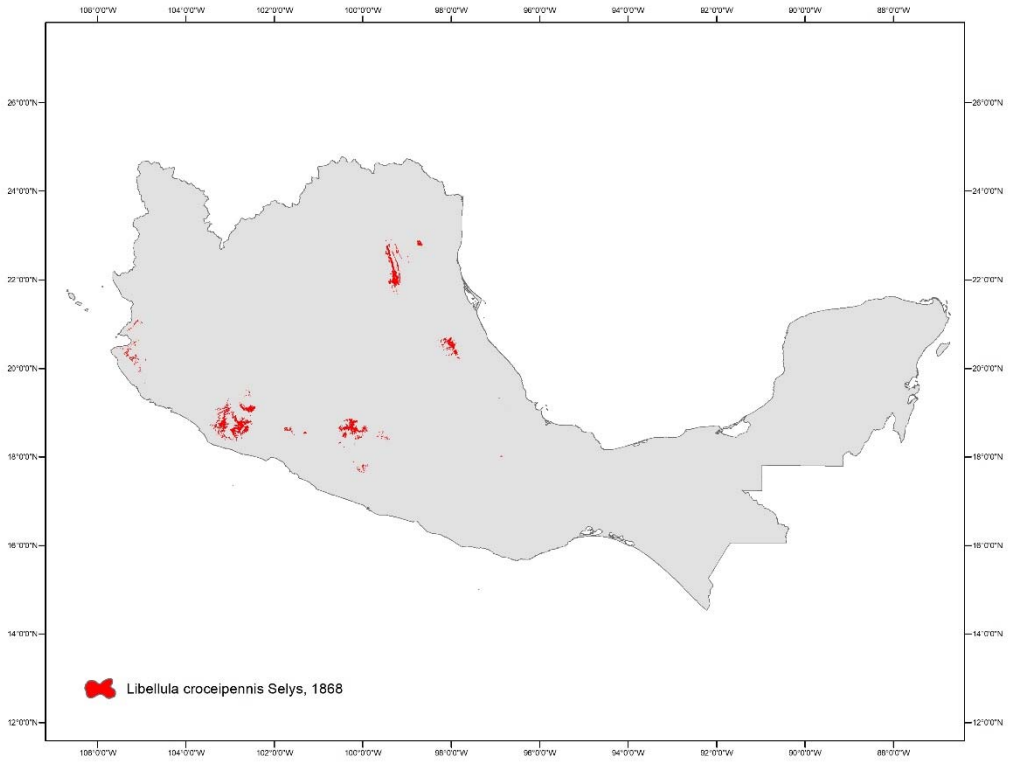
Ischnura denticollis (Burmeister, 1839)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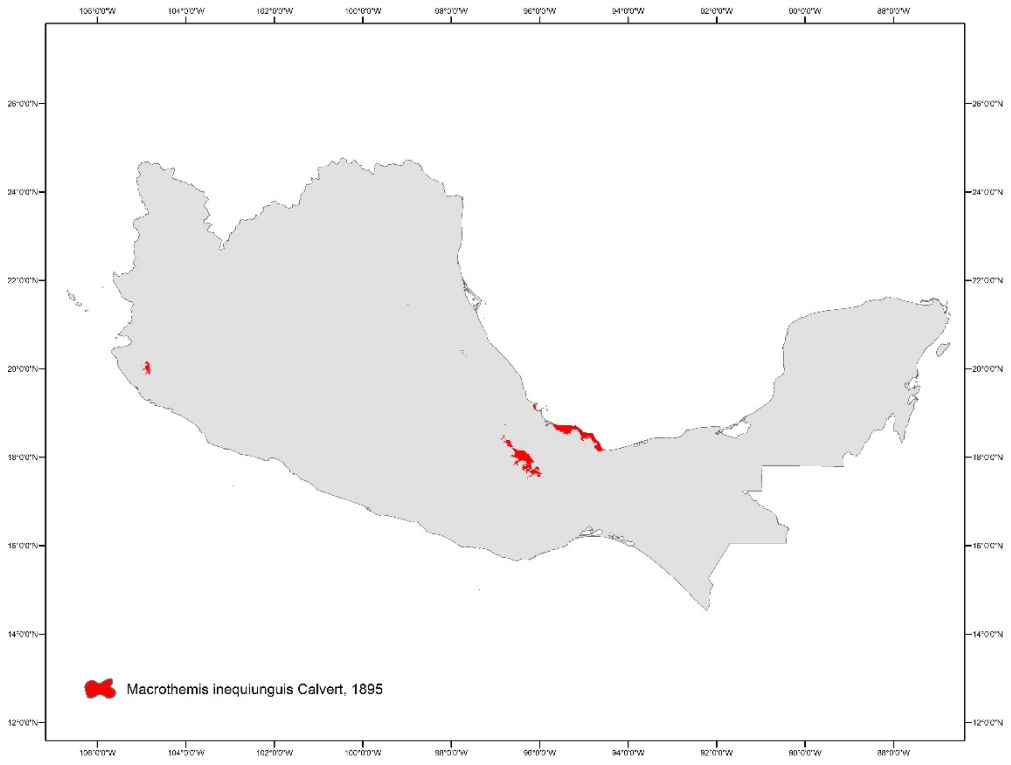
Libellula croceipennis Selys, 1868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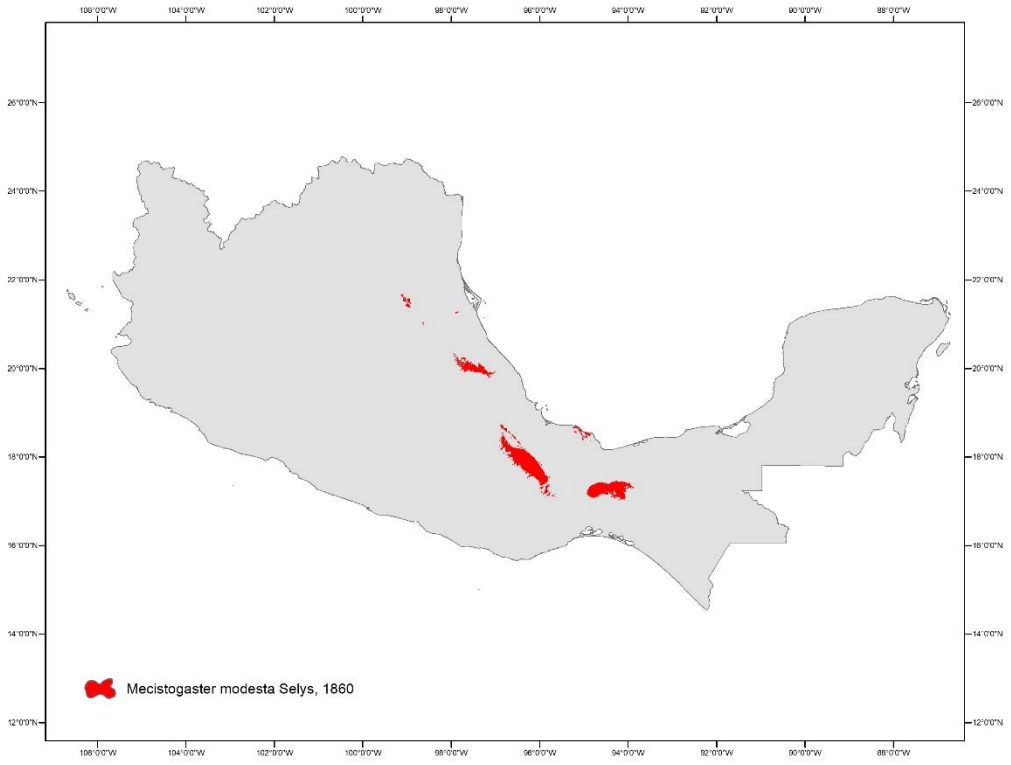
Macrothemis inequiunguis Calvert, 1895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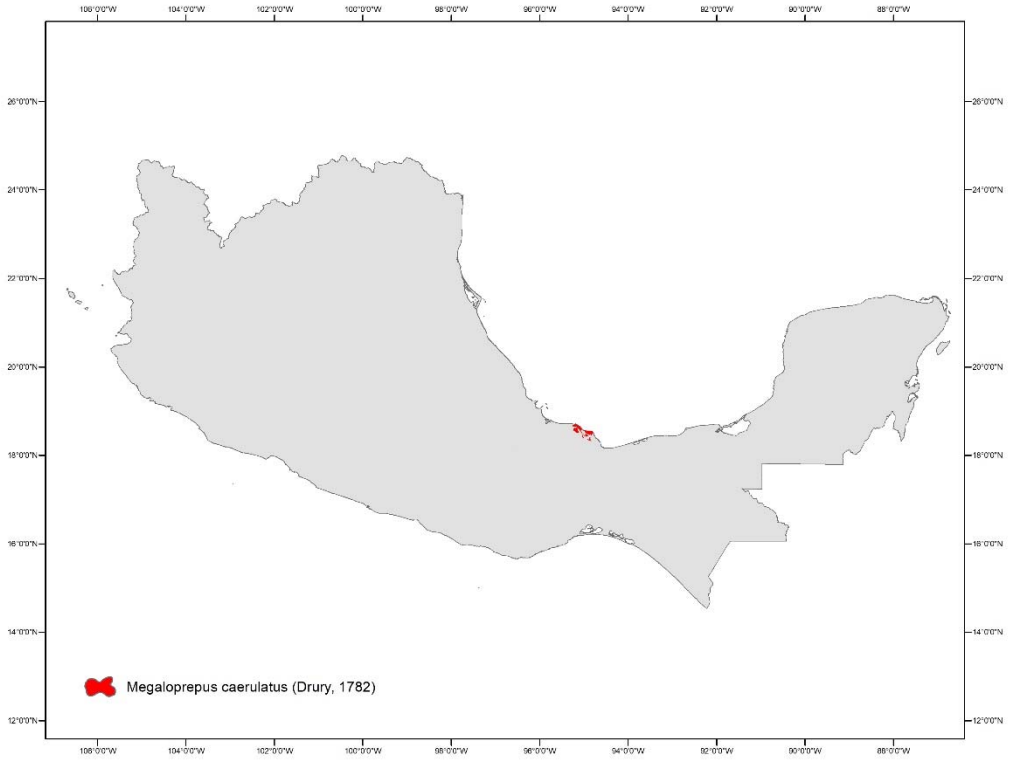
Mecistogaster modesta Selys, 1860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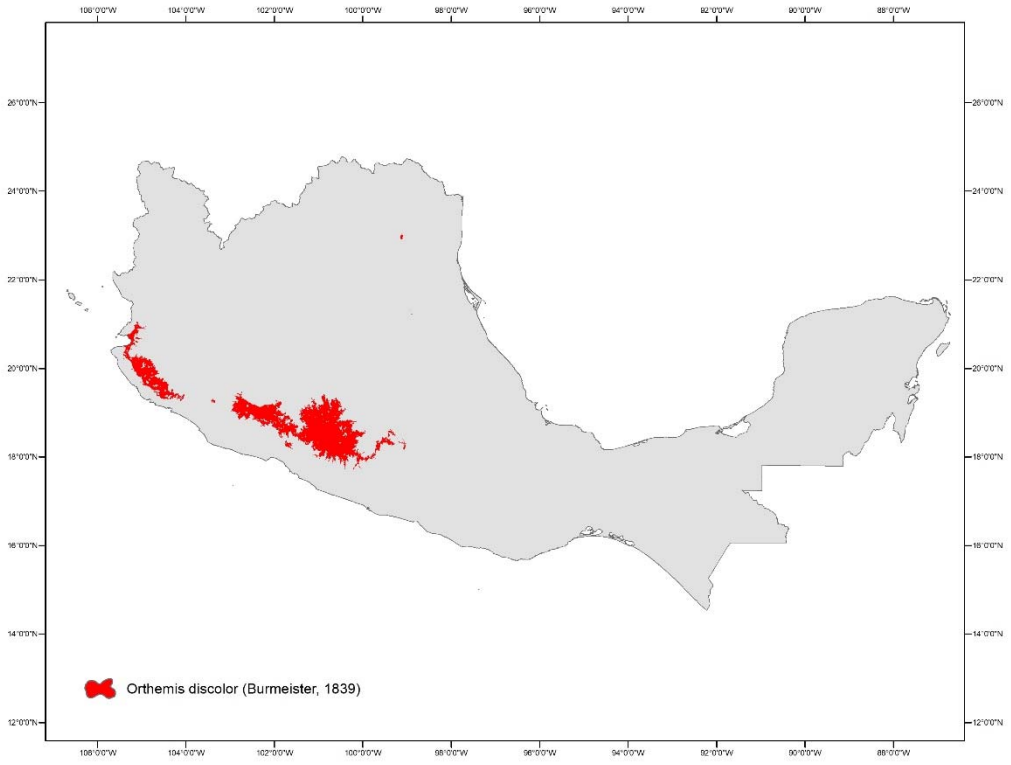
Megaloprepus caerulatus (Drury, 1782)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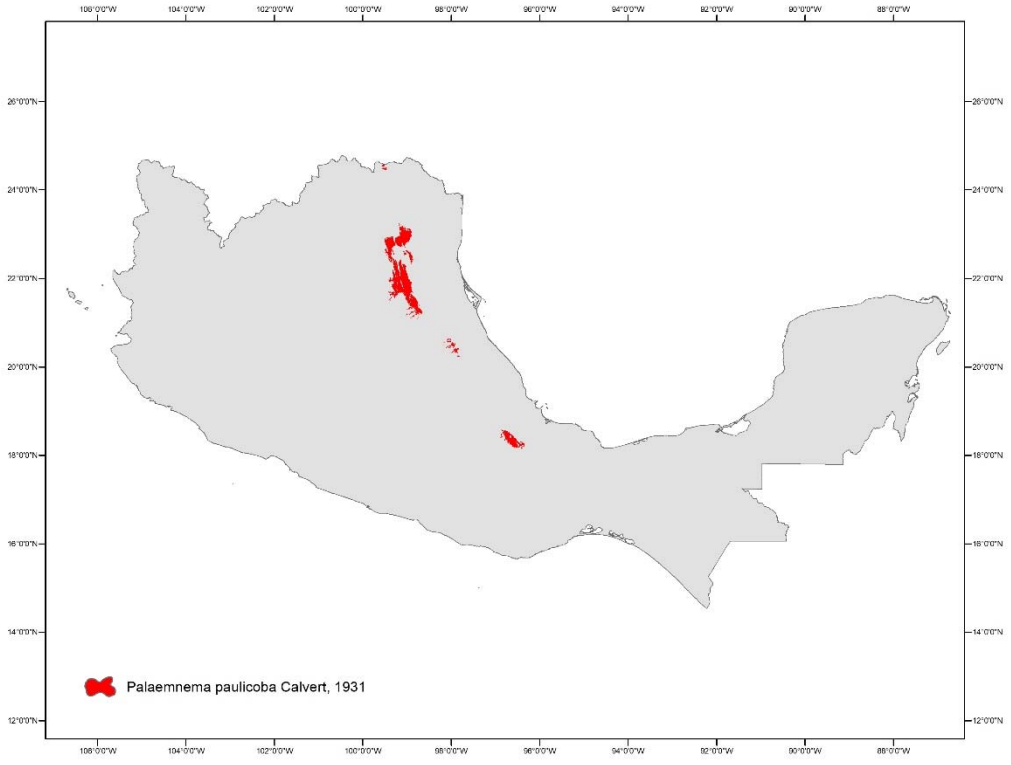
Orthemis discolor (Burmeister, 1839)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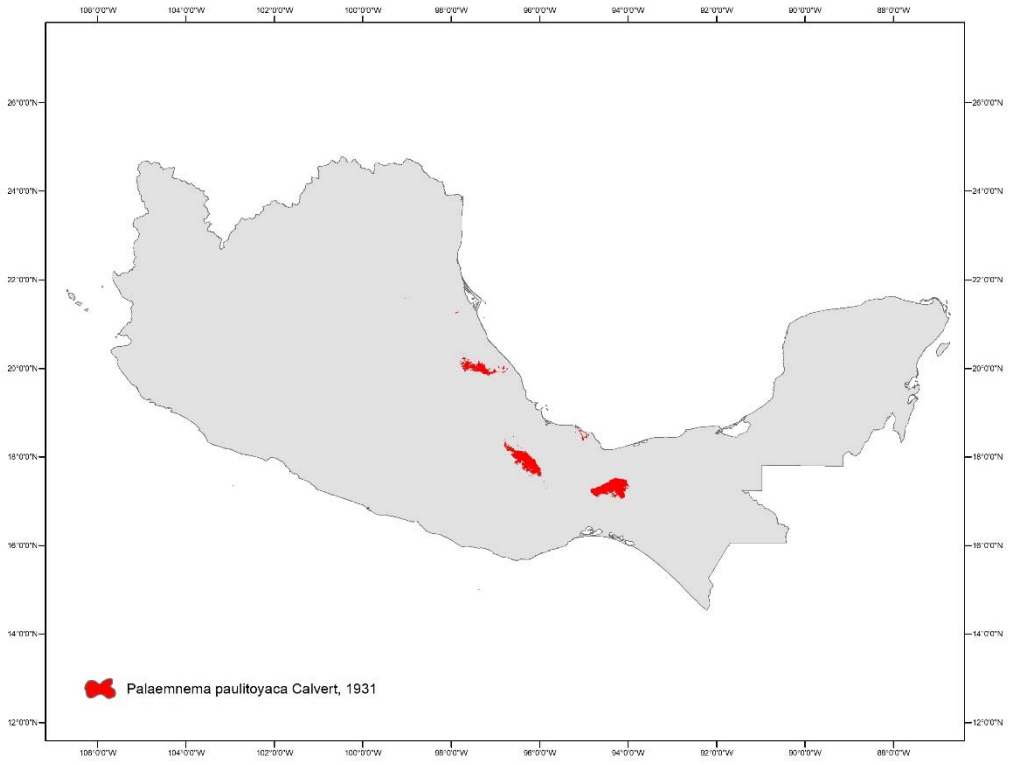
Palaemnema paulicoba Calvert, 1931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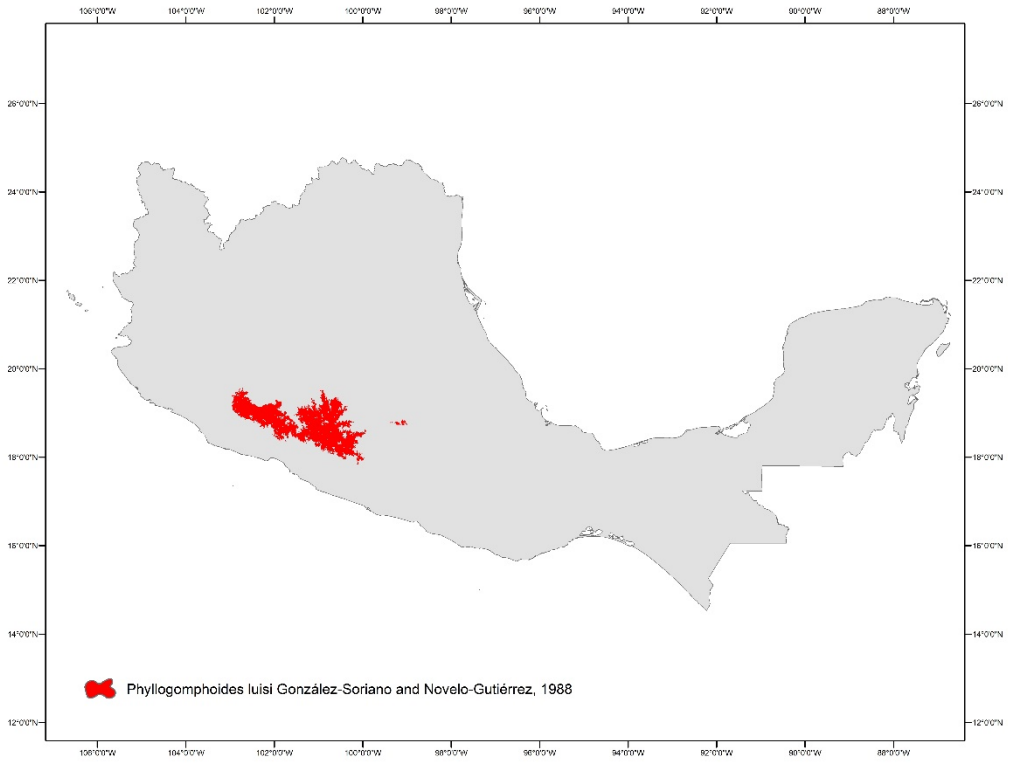
Palaemnema paulitoyaca Calvert, 1931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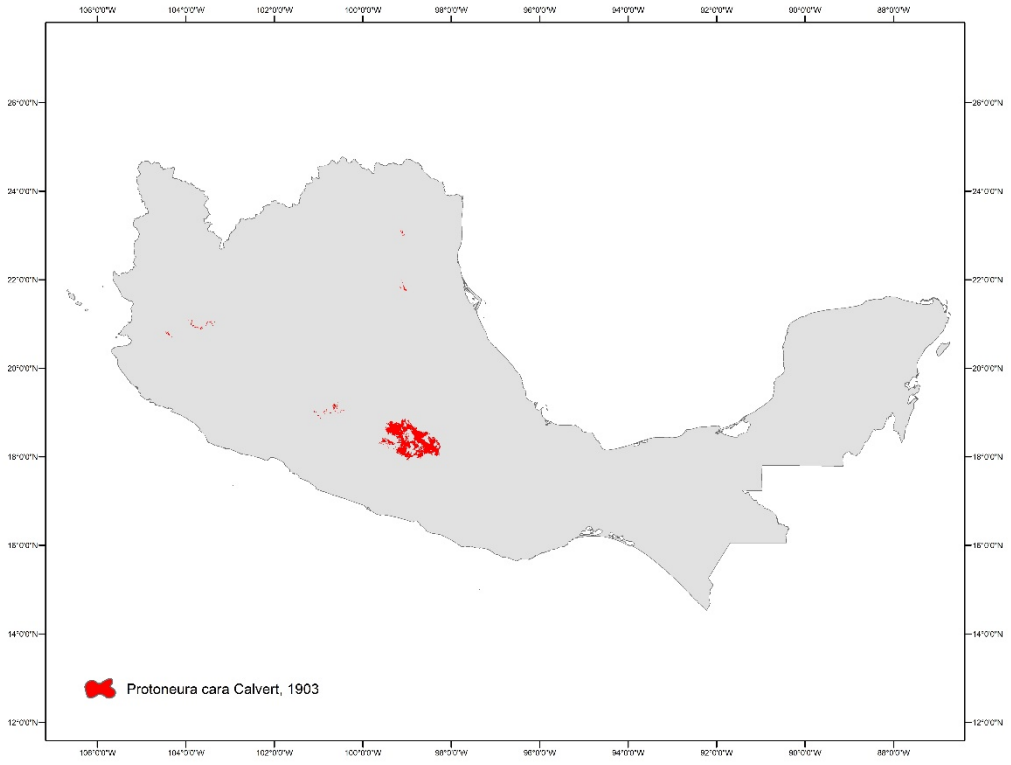
Phyllogomphoides luisi González-Soriano and Novelo-Gutiérrez, 1988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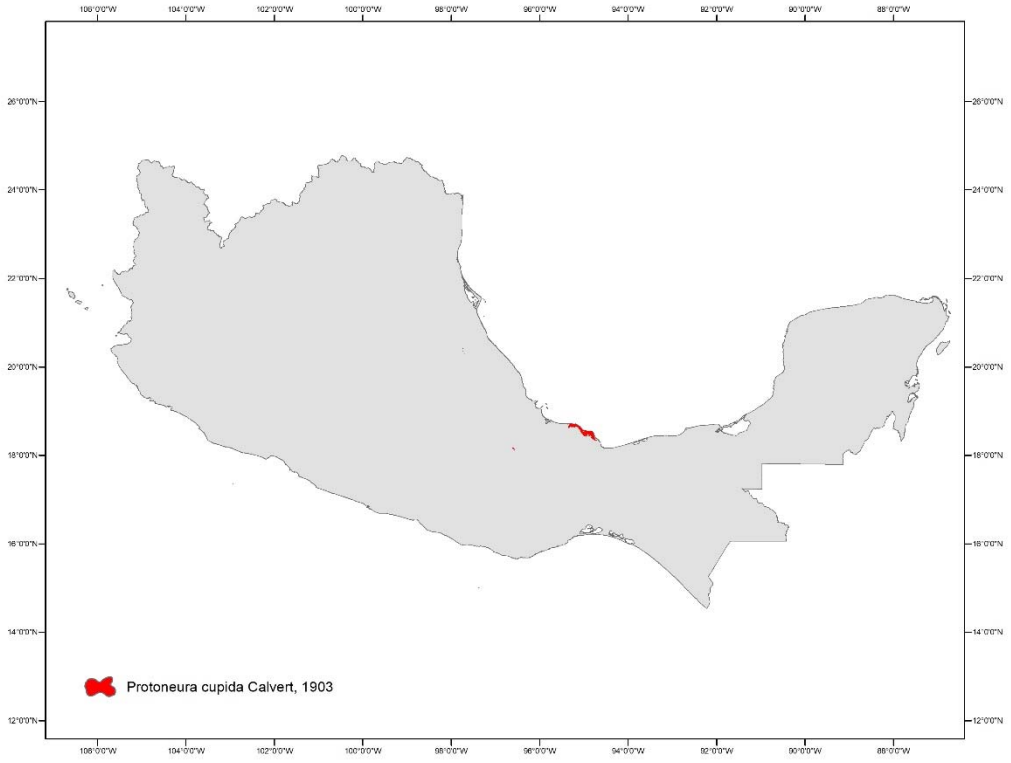
Protoneura cara Calvert, 1903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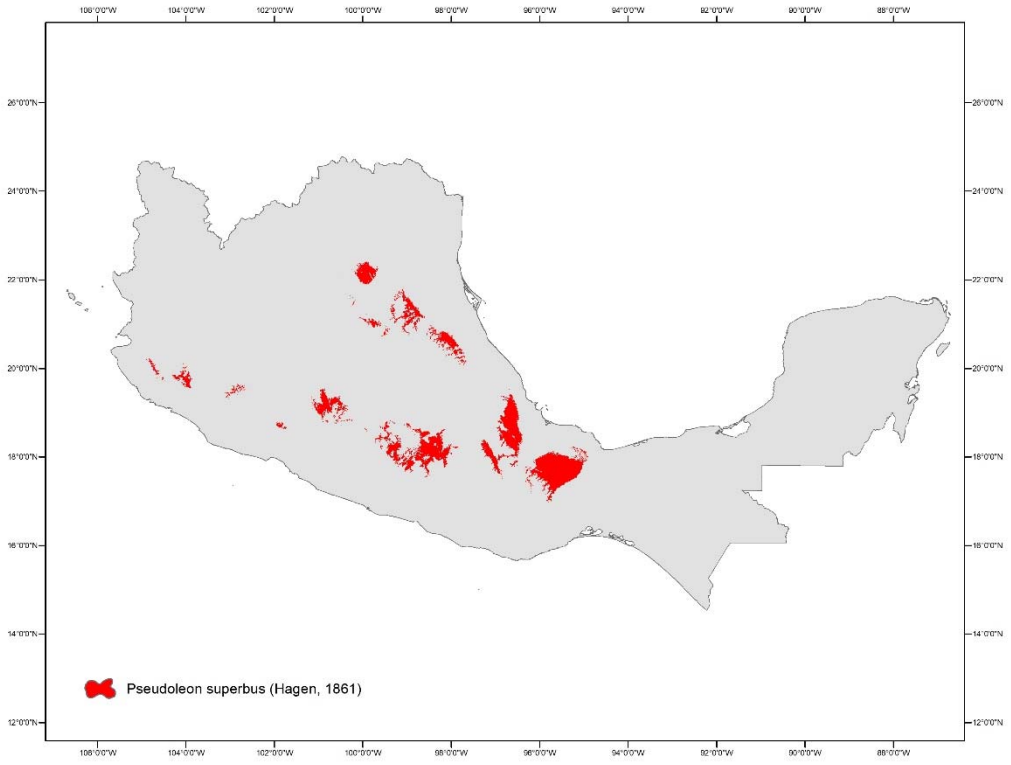
Protoneura cupida Calvert, 1903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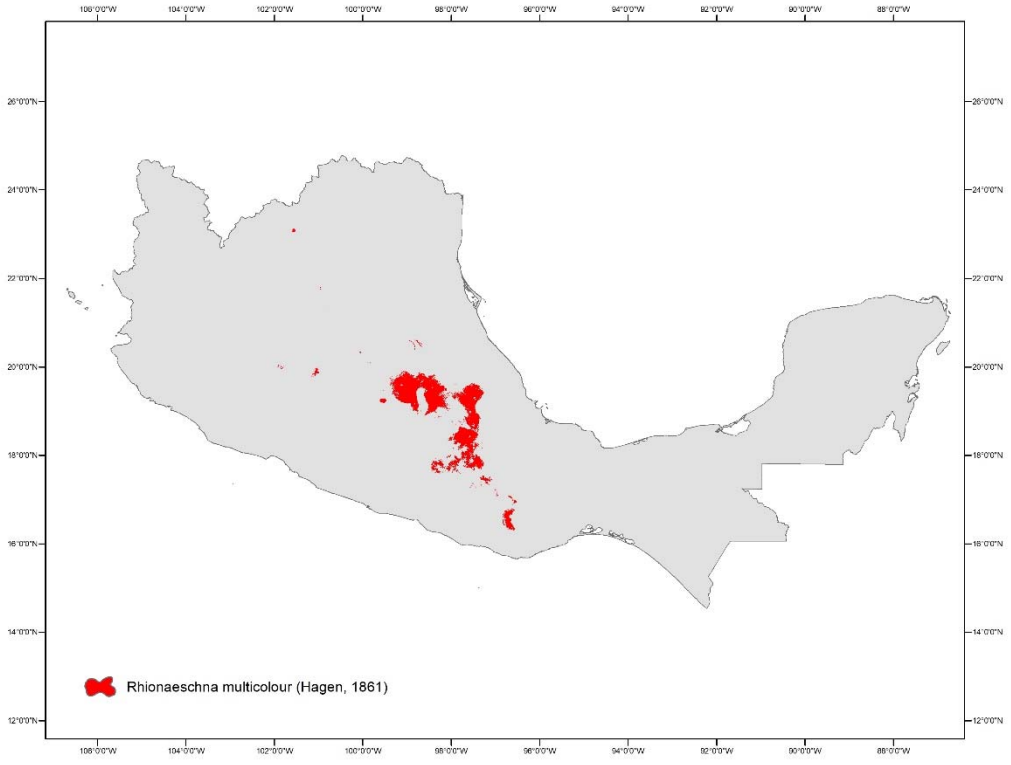
Pseudoleon superbus (Hagen, 1861)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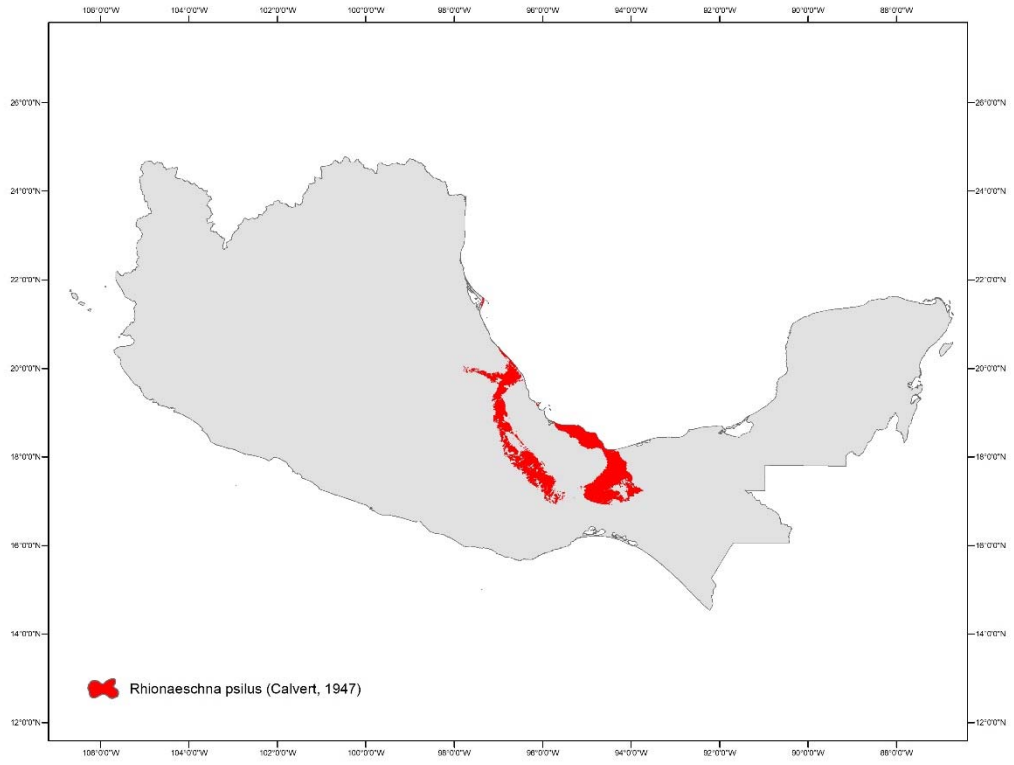
Rhionaeschna multicolour (Hagen, 1861)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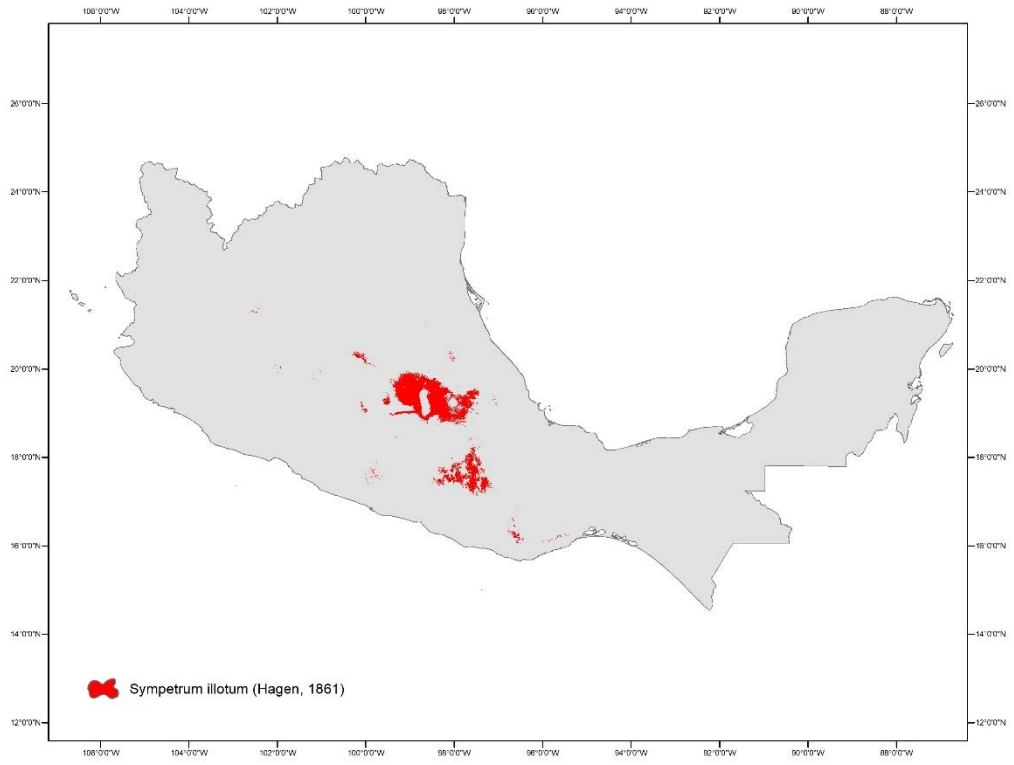
Rhionaeschna psilus (Calvert, 1947)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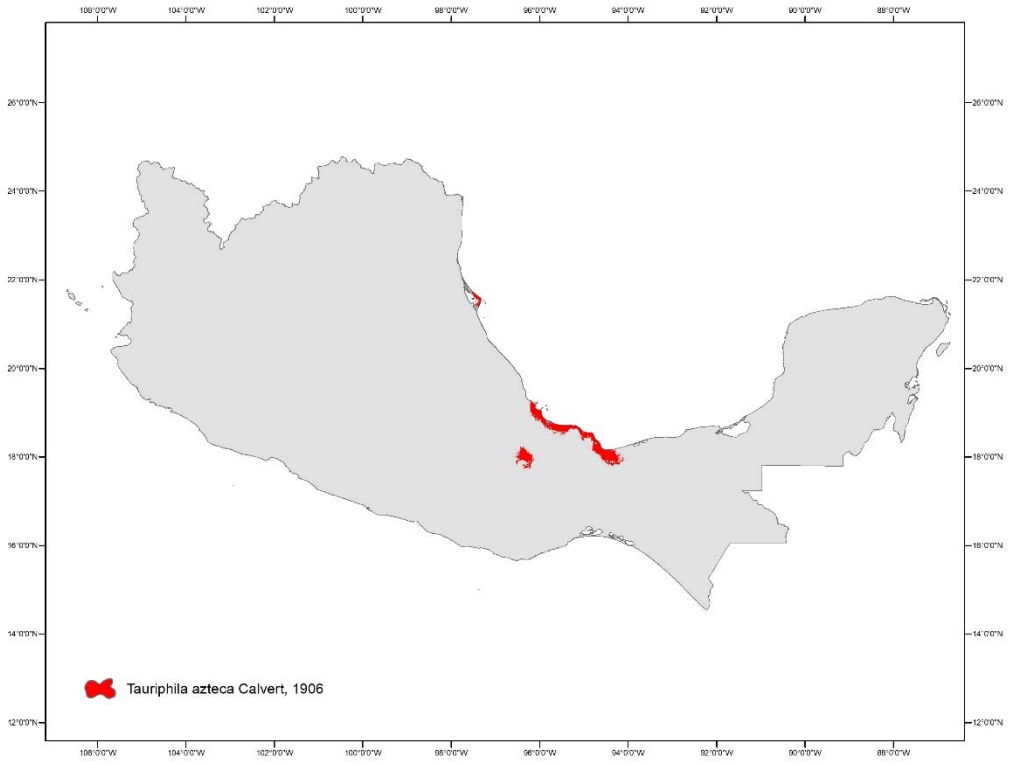
Sympetrum illotum (Hagen, 1861)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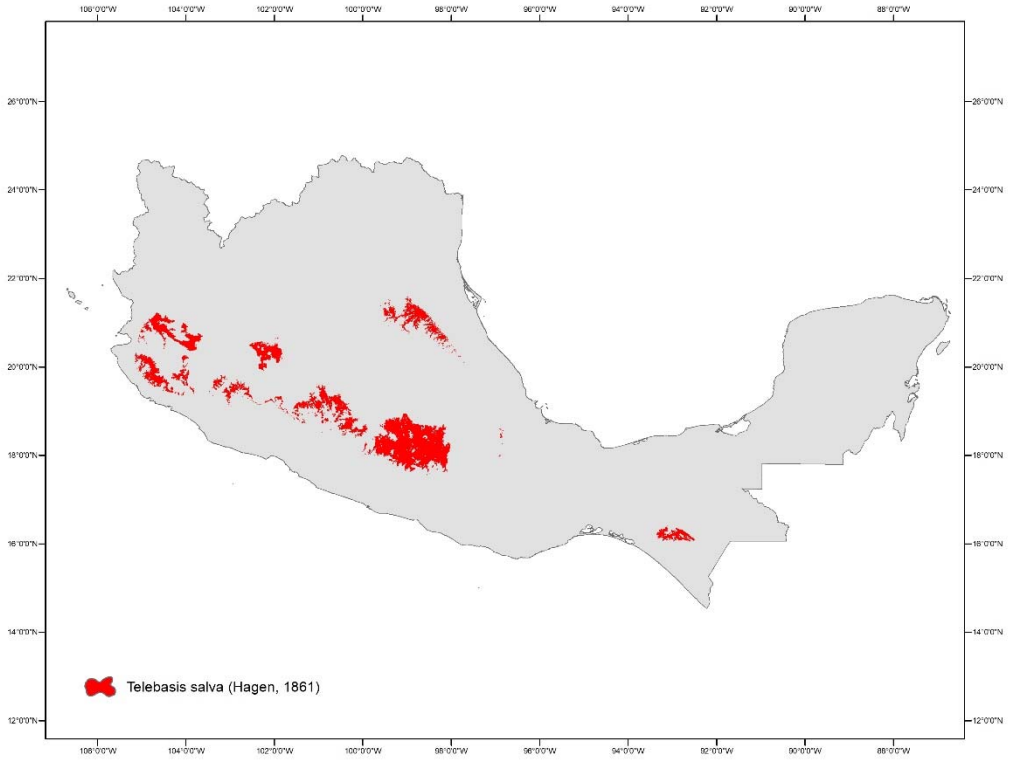
Tauriphila azteca Calvert, 1906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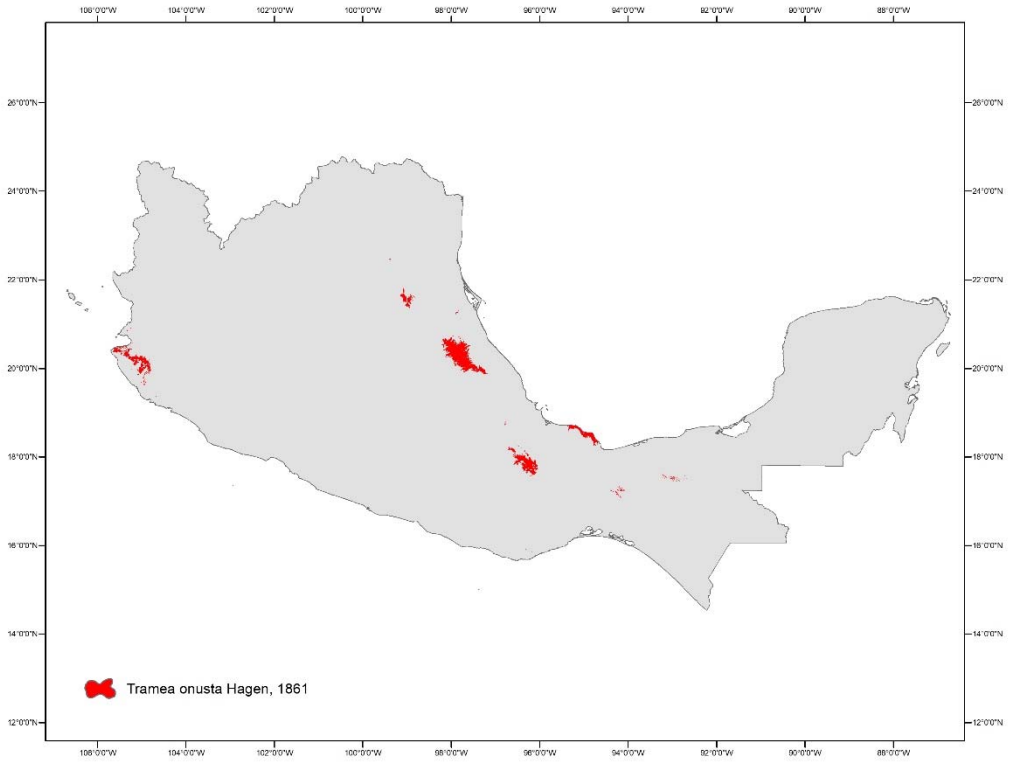
Telebasis salva (Hagen, 1861)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Tramea onusta Hagen, 1861

Fig. S2. LULCC maps corresponding to series IV, V and VI from INEGI (2102, 2015, 2017) used in this study.

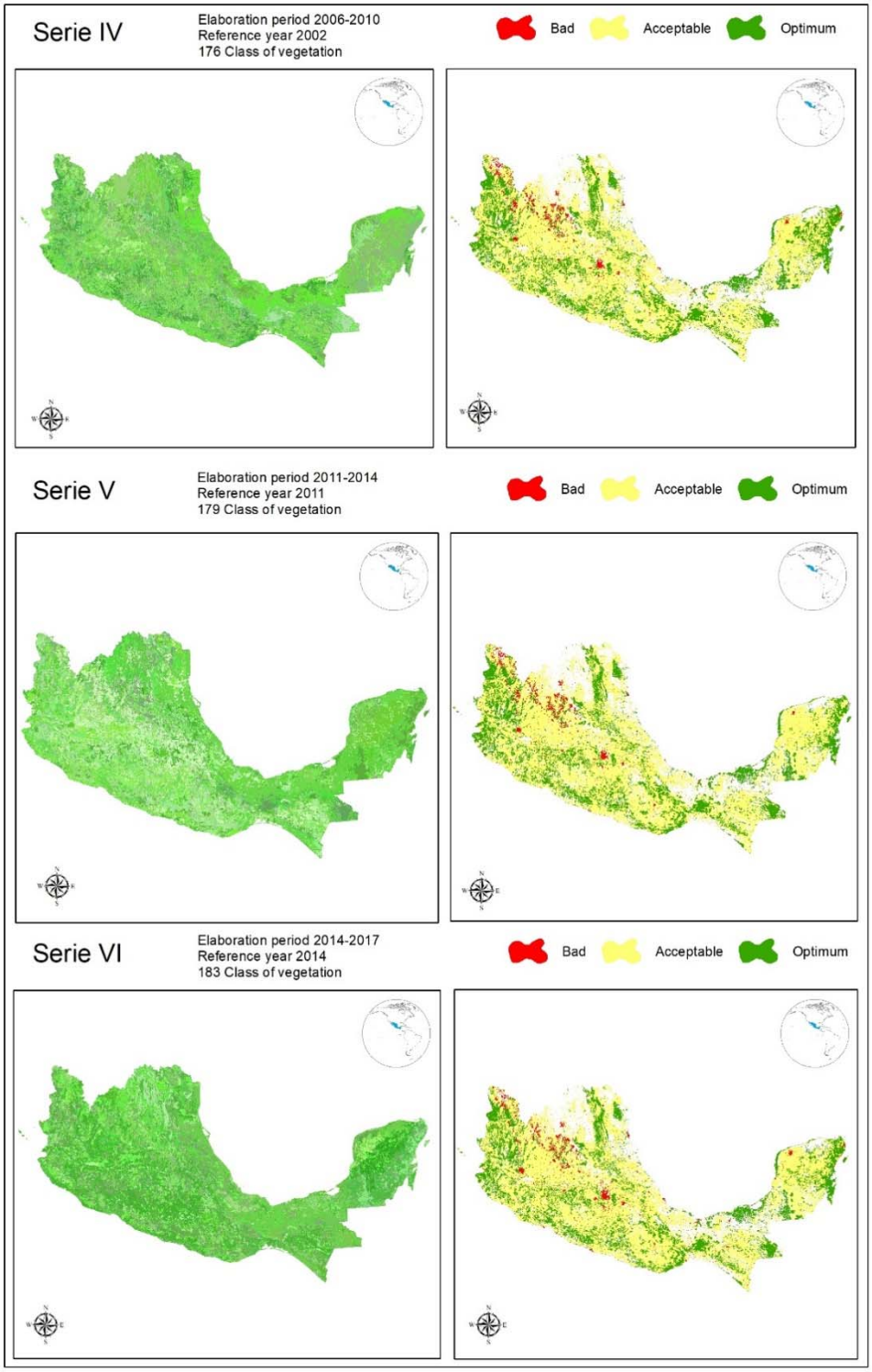


Fig. S3. Variables and distance maps used in this study.

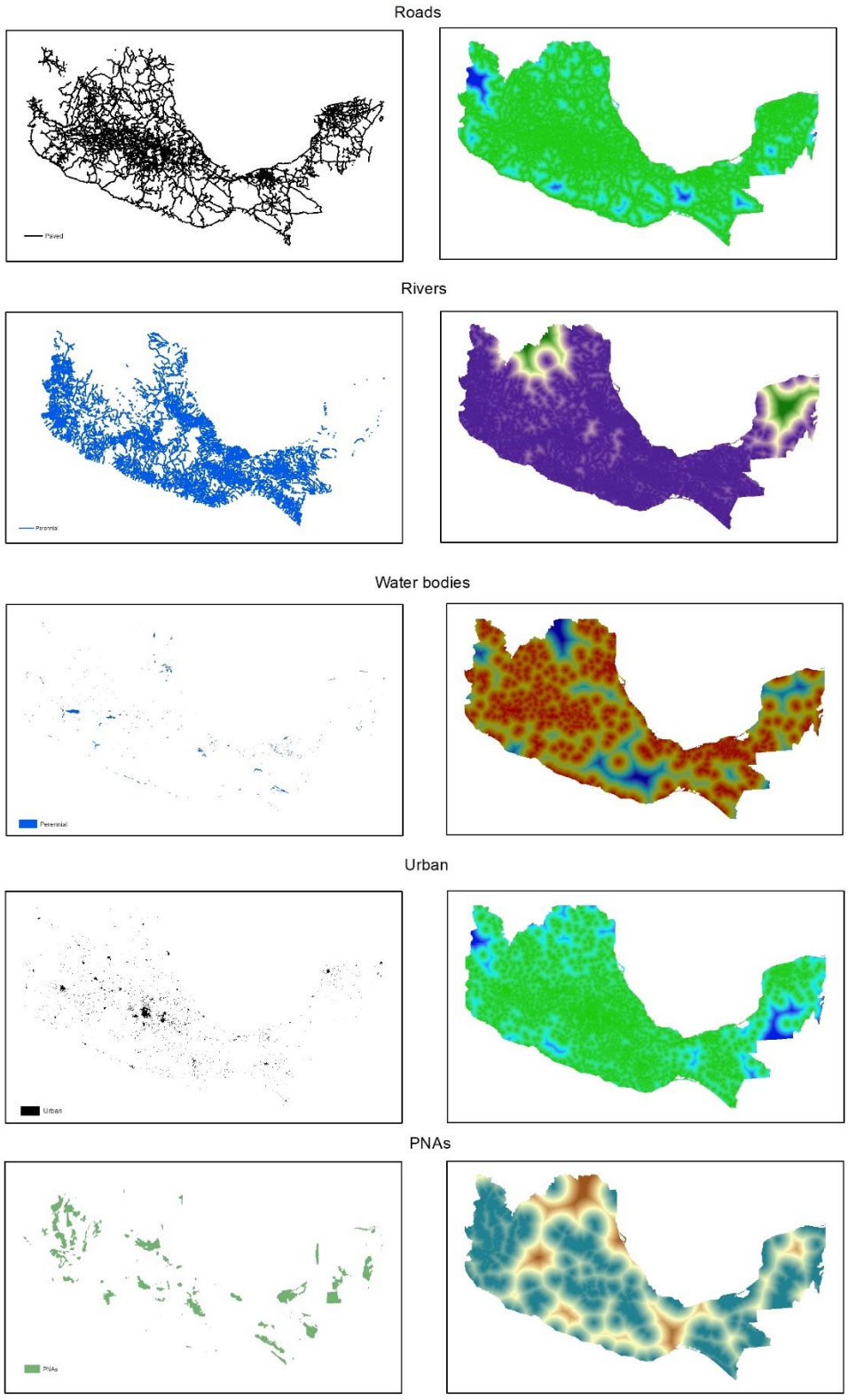


Fig. S4. A graphical description of the methodology of deforestation modeling (modified from Mas & Flamenco Sandoval, 2011).

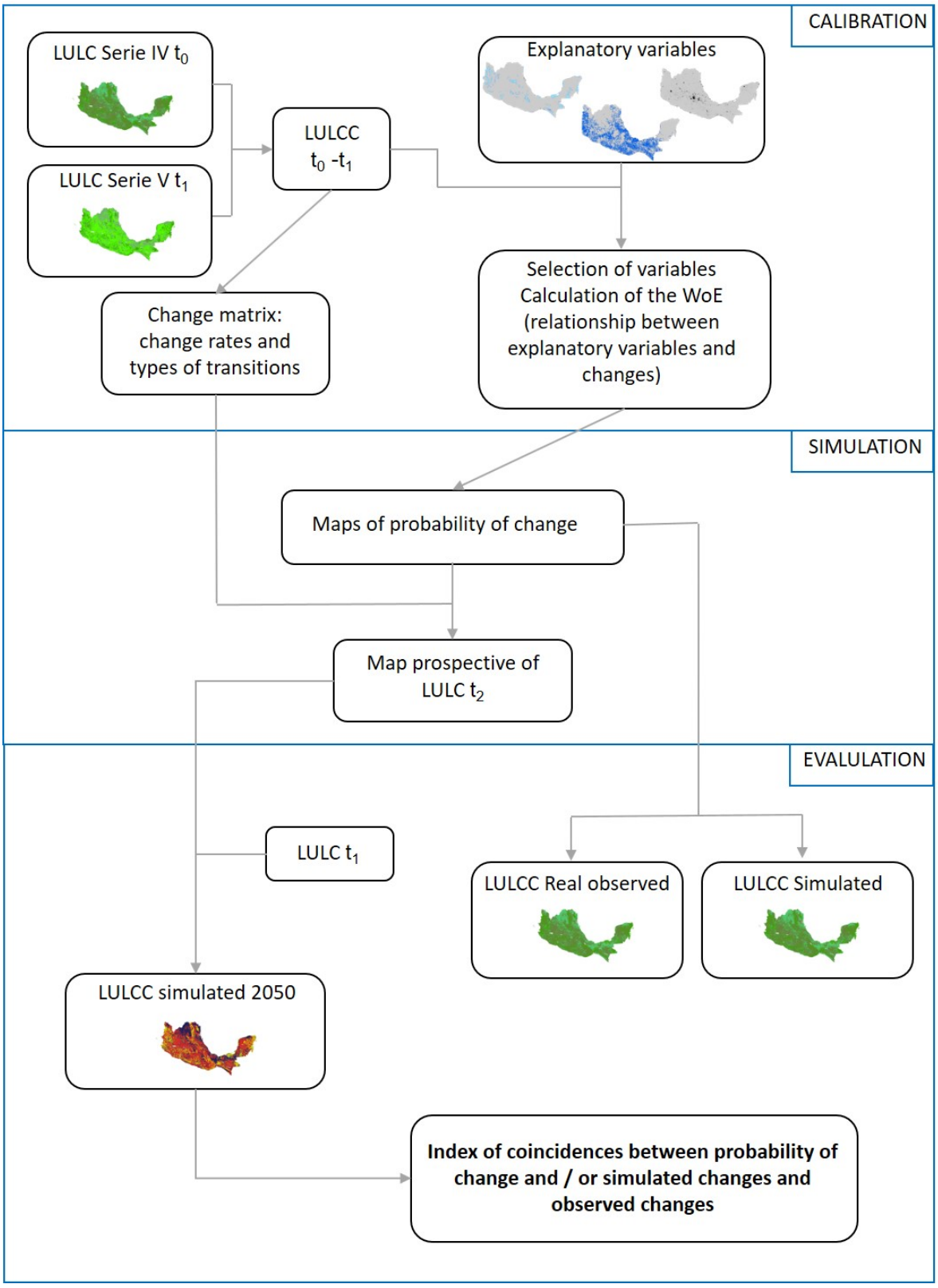
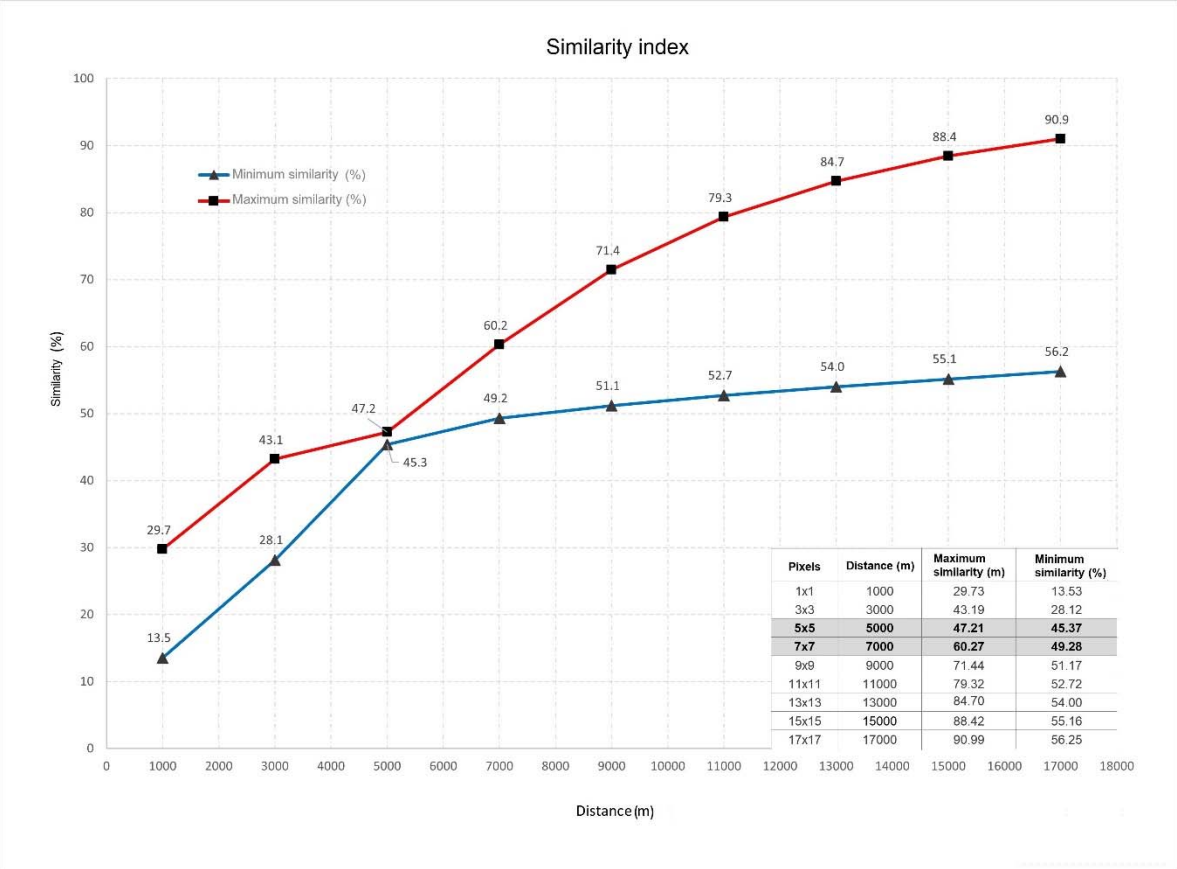


Fig. S5. Validation of multiple similarity windows of the simulated map. In the graph at a distance of 1,000 m (1x1 pixels), the similarity was 29.7% and 13.5%, while for a distance of 17,000 m (17x17 pixels) the similarity was 56.2% and 90.9%.



Pixels	Distance (m)	Maximum similarity (m)	Minimum similarity (%)
1x1	1000	29.73	13.53
3x3	3000	43.19	28.12
5x5	**5000**	**47.21**	**45.37**
7x7	**7000**	**60.27**	**49.28**
9x9	9000	71.44	51.17
11x11	11000	79.32	52.72
13x13	13000	84.70	54.00
15x15	15000	88.42	55.16
17x17	17000	90.99	56.25

Table S1. Vegetation classes and their equivalences for all INEGI series used in this study.

DESCRIPTION	CLASS
Urban construction	0
Crassicaul scrubland	1
Cultivated grassland	1
Induced grassland	1
Iowland deciduous forest	1
Permanent seasonal agriculture	1
Rosette scrubland	1
Sarcocaule scrubland	1
Secondary arborescent vegetation of highland rainforest	1
Secondary arborescent vegetation of lowland deciduous forest	1
Secondary arborescent vegetation of lowland thorny semi-deciduous forest	1
Secondary arborescent vegetation of midland rainforest	1
Secondary arborescent vegetation of midland semi-deciduous rainforest	1
Secondary arborescent vegetation of midland semi-evergreen forest	1
Secondary arborescent vegetation of montane cloud forest	1
Secondary arborescent vegetation of pine forest	1
Secondary arborescent vegetation of pine-oak forest	1
Secondary arbustive vegetation of crassicaul scrubland	1
Secondary arbustive vegetation of highland rainforest	1
Secondary arbustive vegetation of lowland deciduous forest	1
Secondary arbustive vegetation of lowland thorny semi-deciduous forest	1
Secondary arbustive vegetation of mangrove	1
Secondary arbustive vegetation of midland rainforest	1
Secondary arbustive vegetation of montane cloud forest	1
Secondary arbustive vegetation of oak forest	1
Semi- permanent and permanent irrigation-based agriculture	1
Semi- permanent irrigation-based agriculture	1
Semi-permanent and permanent seasonal agriculture	1
Semi-permanent seasonal agriculture	1
Submontane scrubland	1
Yearly and permanent irrigation-based agriculture	1
Yearly and permanent seasonal agriculture	1
Yearly and semi-permanent irrigation-based agriculture	1
Yearly irrigation-based agriculture	1
Yearly rain-based agriculture	1
Yearly seasonal agriculture	1

Yearly seasonal and semi-permanent agriculture	1
Cultivated forest	2
Highland rainforest	2
Mangrove	2
Montane cloud forest	2
Oak forest	2
Oyamel forest	2
Pine forest	2
Pine-oak forest	2
Semi-evergreen tropical forest	2
Thalia forest	2

Table S2. Selection of exploratory variables used for the deforestation model.

No	Variable type	Name	Units	Acronym
1	Proximity	Distance to bodies of water	m	DistCA
2	Proximity	Distance to urban construction	m	DistZU
3	Proximity	Distance to rivers	m	DistRios
4	Proximity	Distance to roads	m	DistCam
5	Proximity	Distance to ANP´s	m	DistANP
6	Proximity	Protected Natural Areas		ANP
7	Proximity	Distance to Serie IV	m	DistSIV

Table S3. Similarity index according to window size.

Pixels	Distance (m)	Maximum similarity (%)	Maximum similariry (Original)	Minimum similarity (%)	Minimum similarity (Original)
1x1	1000	13.5	0.13526733	29.7	0.29728871
3x3	3000	28.1	0.281244729	43.2	0.431900021
5x5	5000	45.4	0.453653953	46.9	0.469206736
7x7	7000	49.3	0.492798136	60.3	0.602715466
9x9	9000	51.2	0.511676552	71.4	0.714430282
11x11	11000	52.7	0.52721881	79.3	0.793219767
13x13	13000	54.0	0.539980936	84.7	0.846986965
15x15	15000	55.2	0.551551578	88.4	0.884225237
17x17	17000	56.3	0.562539716	91.0	0.909946269
19x19	19000	57.1	0.570800678	92.8	0.927860637
21x21	21000	57.9	0.578770388	94.1	0.940956075
23x23	23000	58.6	0.586316458	95.1	0.95078669
25x25	25000	59.3	0.592988774	95.8	0.958304219
27x27	27000	59.9	0.599290405	96.4	0.964062839
29x29	29000	60.5	0.60461237	96.9	0.96891791
31x31	31000	61.0	0.609854904	97.3	0.972881478
33x33	33000	61.4	0.613561745	97.6	0.975869214
35x35	35000	61.7	0.617295065	97.9	0.978567814
37x37	37000	62.1	0.620525312	98.1	0.980832711
39x39	39000	62.3	0.623252489	98.3	0.982531383
41x41	41000	62.7	0.626535692	98.4	0.984157772
43x43	43000	62.9	0.628918661	98.6	0.985555261
45x45	45000	63.1	0.630666172	98.7	0.98663952
47x47	47000	63.3	0.632784368	98.8	0.987639448
49x49	49000	63.5	0.634558356	98.8	0.988374334
51x51	51000	63.6	0.63627939	98.9	0.9892056
53x53	53000	63.7	0.637497352	99.0	0.99001277
55x55	55000	63.9	0.63866236	99.1	0.990723562
57x57	57000	64.0	0.639615548	99.2	0.99154278
59x59	59000	64.1	0.640595213	99.2	0.992289714