

Northern Costa Rica: Guanacaste, Monteverde & Bijagua

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Dec 17-25 (8 nights)

Even after 2 trips to Costa Rica, I still had literally dozens of species left to find in this wonderful and biodiverse country. My parents were keen to travel somewhere with me over the holiday season and let me choose the location, so Costa Rica was a natural choice as it allowed me to easily combine some serious mammal watching with more “normal” tourist activities. In fact, I can’t think of many destinations that could be better!

Ironically, this “not-so-hardcore” trip ended up producing a better mammal list than my two previous CR visits combined, both of which I’d classify as “hardcore.” Funny how that happens sometimes. We spent the first 2 nights on a more focused bat quest in Guanacaste guided by my friend Vino de Backer (vino.monteverde@gmail.com / WhatsApp +506 8502 7056), with the remainder of the tour visiting more normal tourist sites like Monteverde and Tenorio. From both a vacation and mammal front, the trip was a success, extraordinarily so for mammals as it produced mega-rarities like White-winged Vampire Bat, Spectral Bat, and Goldman’s Water Mouse. A big thank you in particular to Vino, Eduardo Artavia, and Eberth Villegas for their help in the field and to Fiona Reid and Vino for helping sort out IDs afterward.



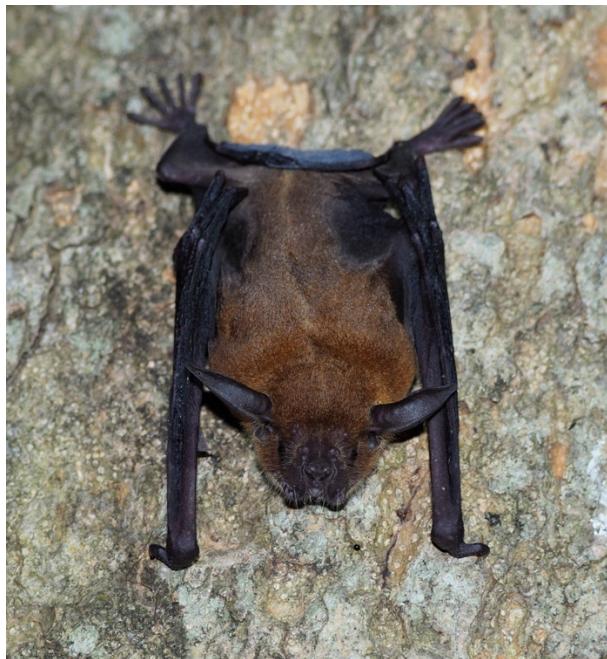
White-winged Vampire Bat

Dec-Jan proved to be a pleasant time to visit from a tourism perspective, with mild weather and scattered rains. However, if you want to visit these sites on a serious mammal expedition, I’d recommend visiting during the hotter, drier months of Mar-Apr; this period offers far more productive mistnetting (as bats are concentrated around water sources) and better weather in the highlands, which can be very windy and rainy in Dec. Fruiting trees also seemed very scarce at all sites visited in this time of year.

The majority of this trip represented my first time in Costa Rica without Vino, and to be honest, it was a shock to the system. Used to Vino's nearly unfettered access to places well off the tourist route (where I could, for example, walk at night freely without guides), sites like Monteverde felt more like Disneyland than the wild nature I'd experienced on my prior trip. Every site seemed to come with entry time limits, guide requirements, access fees, and a ream of red tape (presumably due to fear of lawsuits by American tourists). You can avoid all this by driving small rural roads at night, and that can be good; however, as is usually the case with tropical forest, walking in good forest was both more productive and offered a better experience. I say this not to complain – after all, I had a great time in Monteverde and Bijagua – but just to set expectations for others. If you want to see a lot of mammals at these sites, be prepared to shell out extra cash for private guides and more hours in the field.

Dec 17, Cuajiniquil (CU)

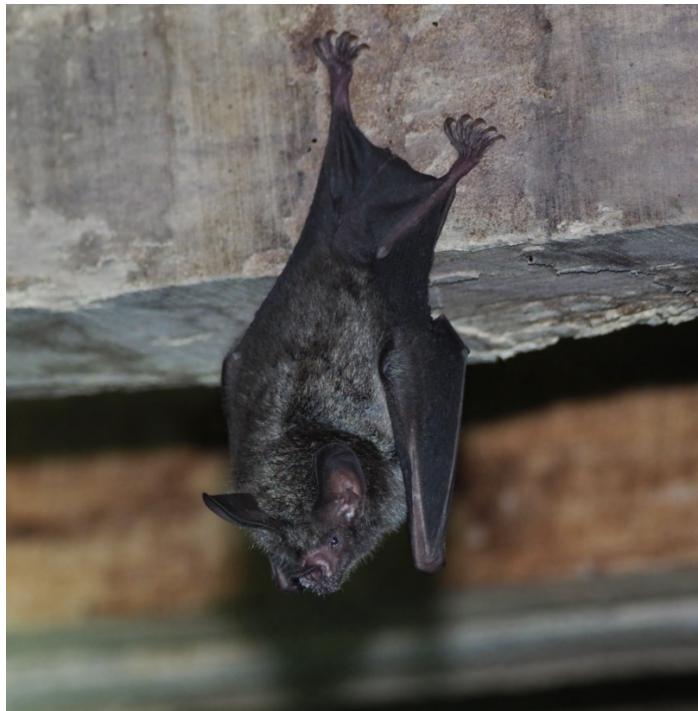
We arrived in Liberia around midday, where we met Vino and (like last time) drove 1h to Cuajiniquil, where we linked up with Eduardo Artavia. Eduardo is an expert on Guanacaste's bats and it was nice to survey with him again, since my last visit in 2023. Our first location was Cuajiniquil Creek, a site where we'd "discovered" an amazing diversity and abundance of (usually rare) molossids in 2023. Several additional bat species have been caught on subsequent mistnetting surveys; I was hoping for Bonda (*Molossus bondae*) and Miller's Mastiff Bats (*M. pretiosus*), as well as the off-chance of Orange-throated, Hairy Big-eyed, or Wrinkle-faced Bats (all known from this site).



Lesser Fishing Bat and White-winged Vampire Bat

We opened the mistnets at 6PM, and long story short, found none of those. The site was incredibly quiet, with few molossids drinking from the river pools. In 3 hours, we only caught 2 **Lesser Fishing Bats** (which now roost nearby), a **Gray Short-tailed Bat**, and a few **Jamaican Fruit-eating Bats**, and I saw a **Common Opossum** nearby. The night was fairly warm, calm, and with a dark moon, so perhaps higher waters, as the

rains just ended in early Dec, were to blame. At around 9:30, 2 large bats hit the net, and Vino, checking from a distance, said they were “vampires.” All of us thought they were Common Vampire Bats until we walked up to the net and simultaneously realized we had captured the legendary **White-winged Vampire Bat!** Cue much celebration. This rare and elusive species – a lifer for even Vino – is known from just 3 other records that I know of in the last 20 years in CR (2 by Eduardo and 1 by Fiona Reid), and is an amazing animal, with white wing tips and larger eyes compared to the Common Vampire. The males have scent glands in their mouths that produce a skunk-like odor, and they make a remarkable guttural sound when handled. After taking measurements and DNA samples, we released the bats and watched them creep along a branch quadrupedally, a posture they use to ambush perched large birds at night. A truly amazing species, and by far my most wanted Central American bat, but so rarely seen I didn’t dare wish for it! We closed the nets around 11PM (adding **Northern Yellow-shouldered Bat** and both **Great** and **Intermediate Fruit-eating Bats**) and returned to the hotel, where sleep didn’t come easily for any of us thanks to the excitement.



‘Dorsal’ Squirrel (*Sciurus variegatoides dorsalis*) and Central American Fringe-lipped Bat

Dec 18, Horizontes (HO) & Volcan Cacao (VC)

After breakfast, Eduardo and I set off to the Estacion Experimental Forestal Horizontes, where he is actively monitoring a roost of **Spectral Bats**. The world’s largest carnivorous bat, this is another truly remarkable species, and the opportunity to see them was the main reason for my return to Guanacaste. This site is not open to tourism; Eduardo was able to arrange my visit as a special favor, thanks to my knowledge of Central American small mammals. 5 individuals (a pair of adults, plus 3 years’ offspring) are currently using the roost; dietary data suggest they primarily feed on a range of medium-sized bird species. Elsewhere on the station, we saw the gorgeous ssp. *dorsalis* of **Variegated Squirrel**; **Gray Sac-winged Bats**, **Seba’s Short-tailed Bats**,

and **Brown Long-tongued Bats** roosting in a disused building; **Greater White-lined Bats** in hollow trees (one of which was shared with the *Vampyrum*); and **Pygmy** and (likely) **Thomas's Fruit-eating Bats** in leaf tents.



Top: Costa Rican Pygmy Rice Rat and Long-furred Arboreal Rice Rat; Bottom: two photos of the amazing Goldman's Water Mouse

After lunch and an afternoon break, we drove to the largely-disused Estacion Gongora, located at ~700m on the slopes of Volcan Cacao in the PN Guanacaste. While Vino and Eduardo prepared the nets, I checked out the station, seeing the roost of 30-40 **Central American Fringe-lipped Bats** and groups of **White-faced Capuchin** and **Central American Spider Monkey**. We netted from roughly 6-10PM, catching ~50 individuals of 9 bat species; although steady, it was a far cry from the roughly 2x that amount they captured on their last visit in July 2023. Highlights were the scarce **Gray's Long-tongued Bat** and the pretty **Heller's Broad-nosed Bat**, plus **Jamaican**, **Great**, **Toltec**, **Pygmy**, and **Thomas's Fruit-eating Bats**, **Seba's Short-tailed Bat**, and many **Common Vampire Bats** (which night-roosted under the bridge). I spent much of the time netting walking up and down the road to the station, seeing several **Big-eared Climbing Rats** and **Costa Rican Pygmy Rice Rats** as well as 2 each **Virginia Opossums** and **Central American Woolly Opossums**. Another focus was staking out the river itself, where Vino had seen a Southern Spotted Skunk last time; no luck on that species, but lightning struck yet again when I spotted large mouse sitting on a rock in the middle of the river in my thermal scope. I immediately realized that this was a **Goldman's Water Mouse**, another absolute mega from an incredibly elusive genus

(*Rheomys*) I'd long dreamed of seeing. Vino, Eduardo, and I watched this animal for ~20 seconds (while I took several photos), until it dove into the water, swimming skillfully through the fast current of the small, clear, rocky river until it disappeared (presumably into a den) under the opposite bank. Cue more elation. On the drive back to the hotel, I added more **Big-eared Climbing Rats** and **Costa Rican Pygmy Rice Rats**, a single **Coues' Rice Rat**, **Mexican Mouse Opossum**, **Honduran Cottontail**, **Common Opossum**, and a bright reddish rice rat 2-3ft up a tree trunk. I initially thought it might be a Rusty Rice Rat (*Handleyomys rostratus*), but Fiona Reid and Mark Engstrom were almost certain it was not this species, based on its bright white belly, arboreal habits, and the shape of its hind foot. Fiona instead thought that these features best fit the **Long-furred Arboreal Rice Rat** (*O. trinitatis*). A species complex occurring from the Pacific zone of Costa Rica south to eastern Brazil, the population in CR almost certainly represents an undescribed species. Another spectacular night.



Short-nosed Harvest Mouse and West Andean Long-nosed Armadillo

Dec 19, Liberia to Monteverde (MV)

Vino dropped us back at the airport to pick up a rental car (a Toyota Corolla Cross from Hertz, which was fine, if a bit underpowered and overpriced), and we drove ~2h to Monteverde. We spent the afternoon with my friend Jim Wolfe at his place near La Cruz, where we saw **White-faced Capuchins** and **Central American Agoutis**. The evening's weather was not ideal (windy with rain showers), but Vino offered to net bats at the Curi Cancha Reserve anyway. At dusk I met up with local guide Eberth Villegas (WhatsApp +506 8839 6857), recommended by Vino, for a night walk in the reserve. Eberth is great: he's keen on mammals, knows the sites well, and charges a (locally) reasonable flat fee of \$100/night walk regardless of the number of guests or hours spent. Despite the weather, we saw a range of species from 6-9:30PM including **Short-tailed Singing Mouse** (easily seen in short grass by the picnic area), 7 **Collared Peccaries**, **Kinkajou**, the recently-split **West Andean Long-nosed Armadillo**, and a **Short-nosed Harvest Mouse** (4m up a big tree). Vino's nets were very slow, only catching 8 **Brazilian Serotines** (this rare species is locally common in MV). Near the reserve's parking area, we saw a dark-colored, short-eared cottontail; at first, I ID'd it as a Central American Tapeti, but a 2020 genetics study suggested these cloud forest animals at Monteverde are actually Dice's Cottontails. I reached out to the paper's author, Jose Mora for more details; per current genetic data, only *S. dicei* has been confirmed above 1000m in the

Tilaran, Central, and Talamancan Cordilleras. There is no evidence of *S. gabbi* at these sites and he agreed that my sightings likely were **Dice's Cottontail**. A pleasant surprise to find this near-endemic rabbit, a species not on my radar in this area.

Dec 20-21, Monteverde

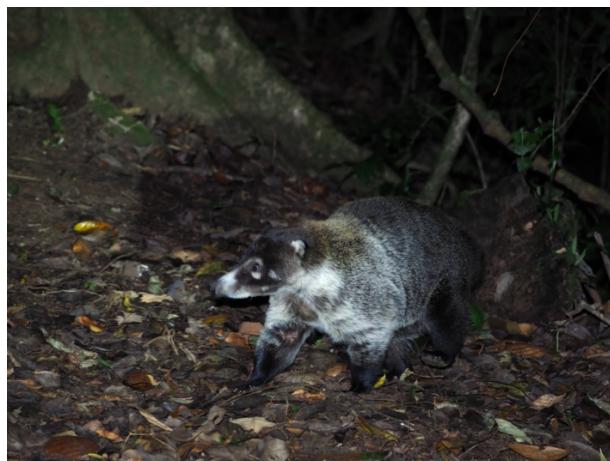
We spent 2 full days in Monteverde, mostly doing tourist stuff with my parents, with the mammal action constrained to night walks. Incidentally, we saw **Central American Agoutis**, **White-nosed Coatis**, **White-faced Capuchin**, and **Red-tailed Squirrel**. Driving down from Monteverde (via Las Juntas) on the last day, we saw a sickly **Virginia Opossum** staggering along the road in broad daylight, a sad sight.



The undescribed harvest mouse of the high cloud forest of Monteverde and a terrible record shot of a Bushy-tailed Olingo

For the night of the 20th, Eberth and I returned to Curi Cancha for a longer night walk (6-11PM) targeting the wetter cloud forest on the ridgeline (approx. 1600m). The weather – misty but less windy – was a little better, and it was an excellent night. While hiking up and down through drier montane forest below the summit, we saw **Dice's Cottontail**, **Short-tailed Singing Mice** (nice views of one individual), **Collared Peccaries**, and **Short-nosed Harvest Mice** (ID'd by duller grayish-ochre coloration, dusky ankles, and 2-note calls) again as well as 2 **Vesper Rats**, a **Nicaraguan Deermouse**, and my personal highlight, **Zeledon's / Mexican Mouse Opossum**. In lovely, very mossy cloud forest at the top, we had good but distant (high in the canopy) views of a pair of **Bushy-tailed Olingos**, a major target of mine, as well as brief looks at the endemic, impressively large and dark **Cloud-dwelling Spiny Pocket Mouse** and a perched **Common Big-eared Bat**. We also had good views of a larger, rich reddish harvest mouse with paler ankles and a fully blackish tail; 3-note calls I heard in the same habitat were likely from this species. Fiona Reid and Mark Engstrom were familiar with this animal, and it has been captured sporadically since the 1990s. A 2023 paper stated that these mice may genetically align with Rodriguez's Harvest Mouse, a rare and poorly-known species. However, both Fiona and Mark noted that these animals were larger and much brighter in color compared to typical Rodriguez's Harvest Mice from Volcan Irazú and felt they're likely an undescribed species – I will temporarily call it **'Monteverde' Harvest Mouse**.

On our last night, we decided to change sites and visit Finca Lantana, a small private reserve closer to town. The reserve is slightly lower than Curi-Cancha, and comprises a tall forest full of lianas along a rocky stream (excellent habitat for my 2 remaining targets, Alston's Mouse Opossum and Watson's Climbing Rat), with regenerating forest and pasture as you ascend the ridge. The weather deteriorated on this night, becoming windy and rainy again. Nonetheless, we saw quite a bit. We had nice views of **Nicaraguan Deermouse** and again, quick views of **Cloud-dwelling Spiny Pocket Mice** in the regenerating forest; in a clearing near the ridgeline (~1500m), I saw an *Oligoryzomys* well. Between coloration (brownish) and habitat/elevation, I think this was the localized, montane **Sprightly Pygmy Rice Rat** rather than *O. costaricensis*, which is common at lower elevations. The stream was more protected from the wind, and we saw a lot of mammals there: 2 **Common Opossums** (one of which was eating a Red-tailed Squirrel), 8 **Collared Peccaries**, a large male **White-nosed Coati, Kinkajou, West Andean Long-nosed Armadillo**, and best of all, a brief **Alston's Mouse Opossum** (identified by its impressively furry tail base) in a vine thicket. We also saw lots of bats, on feeding perches near a fruiting fig: besides many **Jamaican Fruit-eating Bats** we noted 2 **Great Fruit-eating Bats**, at least 1 **Intermediate Fruit-eating Bat**, and 2 **Toltec Fruit-eating Bats**. Several rodents of varying sizes were seen here, both on the ground/among rocks and in trees, but none posed long enough to be ID'd.



Clockwise from top left: Red-tailed Squirrels in Monteverde look really different from others I've seen; Toltec Fruit-eating Bat; Common Opossum eating a frog; White-nosed Coati

Dec 22-25, Tenorio (TE)

I was happy to head home after Monteverde, but my parents wanted to spend a few more days in CR. So, we settled on the Tenorio area, as it seemed to have a balance of mammal possibilities and tourist stuff without adding much driving time. Tenorio is actually a pretty interesting area for mammals and well worth time on a proper mammal trip, though the logistics are a bit annoying, especially for independent exploration. We stayed at Tenorio Lodge, which offers nice accommodation and plenty of mammals: abundant **Variegated Squirrels** (intergrades between the dry forest *dorsalis* and wet forest *thomasi*), **Greater White-lined Bat**, **Baird's Tapir**, **Central American Spider Monkey**, **White-faced Capuchin**, **Central American Woolly Opossums**, **Dark Four-eyed Opossum**, and a group of 3 **Northern Raccoons** were all seen on the grounds at various times. You can walk the 2km trail network by day but not at night; I was eventually (on the 3rd night) granted permission by the owners (since I had snake gaiters) for a night walk but didn't really use it. We didn't look for mammals by day, but did see another **Baird's Tapir** and a **White-nosed Coati** in Tenorio NP.



Baird's (Central American) Tapir and Ocelot

On our first night, feeling the FOMO (a common affliction among mammal watchers) of being in a new area with no plans, I signed up for the group night walk in Tapir Valley NR. This private reserve borders Tenorio NP and has very nice habitat, but despite having great views of 2 **Baird's Tapirs** at dusk, I wouldn't recommend the group excursion to mammal enthusiasts. Most of the night was spent in open habitats with few mammals (just a **Central American Tapeti** and **Vesper Rat**), and the focus was herps and insects. Driving some random roads near the lodge (the best stretch was between Tenorio Lodge and Casa Bentbill) after dinner on the second night was surprisingly good; **Central American Woolly Opossum**, **Zeledon's Mouse Opossum**, **Vesper Rat**, a sleeping **Mantled Howler**, and best of all, a beautiful **Ocelot** were seen.

The only wildlife excursion I'd planned in the area was a private, 7-hour (2-9PM) mammal-focused tour of Tapir Valley. The pricing (\$92/person) is steep, but this is by far the best option you have. We spent the day looking for Central American (Alfaro's)

Dwarf Squirrel; despite checking their favored trees (an *Inga* species) and likely hearing alarm calls of one, we didn't see any, nor did we find Deppe's Squirrel (a rare species in CR but regularly seen here). The 3 hours at night, however, were excellent. We saw another **Baird's Tapir** at close range plus another **Zeledon's Mouse Opossum** by the platform. A trail through primary forest, following the edge of the marsh, was excellent. We didn't have time to continue past the bridge along the creek, but this too would be doubtless great. **Armored Rat**, my key target, was seen well, along with a pair of **Vesper Rats** and **West Andean Long-nosed Armadillo**. The real highlight, though, were the bats: we saw over a dozen night-roosting, more than I've seen in any other Neotropical forest. These included **Great Fruit-eating Bat**, **Heller's Broad-nosed Bat**, **Common Tent-making Bats**, **Common Big-eared Bat**, a **Short-tailed Bat** (*Carollia*) species, and best of all, the gorgeous **Salvin's Big-eyed Bat** and a colony of 3 **Chestnut Sac-winged Bats**, both rare species in CR. So well worth a visit, particularly if you can mistnet here with Vino! Watson's Climbing Rat, Striped Hog-nosed Skunk, Lowland Paca, Tayra, Bushy-tailed Olingo, and both sloths are also seen regularly, especially when there are more fruiting trees (Jul-Aug was mentioned as a good time).



Top: Dark Four-eyed Opossum, Zeledon's Mouse Opossum, and Central American Four-eyed Opossum;
bottom: Salvin's Big-eyed Bat and Chestnut Sac-winged Bat

MAMMAL LIST

1. Central American Woolly Opossum (*Caluromys derbianus*) – VC, TE
2. Common Opossum (*Didelphis marsupialis*) – CU, VC, MV
3. Virginia Opossum (*Didelphis virginiana*) – VC, MV
4. Dark Four-eyed Opossum (*Philander melanurus*) – TE
5. Alston's Woolly Mouse Opossum (*Marmosa alstoni*) – MV
6. Mexican Mouse Opossum (*Marmosa mexicana*) – VC
7. Zeledon's Mouse Opossum (*Marmosa zeledoni*) – MV?, TE
8. West Andean Long-nosed Armadillo (*Dasypus fenestratus*) – MV, TE
9. Mantled Howler (*Alouatta palliata*) – TE
10. Central American Spider Monkey (*Ateles geoffroyi*) – VC, TE
11. White-faced Capuchin (*Cebus capucinus*) – VC, MV, TE
12. Dice's Cottontail (*Sylvilagus dicei*) – MV [probable]
13. Central American Tapeti (*Sylvilagus gabbi*) – TE
14. Honduran Cottontail (*Sylvilagus hondurensis*) – VC
15. Central American Agouti (*Dasyprocta punctata*) – MV
16. Armored Rat (*Hoplomys gymnurus*) – TE
17. Red-tailed Squirrel (*Sciurus granatensis*) – MV
18. Variegated Squirrel (*Sciurus variegatoides*) – CU, HO, TE
19. Cloud-dwelling Spiny Pocket Mouse (*Heteromys nubicola*) – MV
20. Short-tailed Singing Mouse (*Scotinomys teguina*) – MV
21. Nicaraguan Deermouse (*Peromyscus nicaraguae*) – MV
22. Short-nosed Harvest Mouse (*Reithrodontomys brevirostris*) – MV
23. 'Monteverde' Harvest Mouse (*Reithrodontomys* sp. nov.) – MV
24. Goldman's Water Mouse (*Rheomys raptor*) – VC
25. Long-furred Arboreal Rice Rat (*Oecomys* cf. *trinitatis*) – VC
26. Costa Rican Pygmy Rice Rat (*Oligoryzomys costaricensis*) – VC
27. Sprightly Pygmy Rice Rat (*Oligoryzomys vegetus*) – MV [probable]
28. Coues's Marsh Rice Rat (*Oryzomys couesi*) – VC
29. Vesper Rat (*Nyctomys sumichrasti*) – MV, TE
30. Big-eared Climbing Rat (*Ototylomys phyllotis*) – VC
31. Gray Sac-winged Bat (*Balantiopteryx plicata*) – HO
32. Chestnut Sac-winged Bat (*Cormura brevirostris*) – TE
33. Greater Sac-winged Bat (*Saccopteryx bilineata*) – HO, TE
34. Lesser Fishing Bat (*Noctilio albiventris*) – CU
35. Seba's Short-tailed Bat (*Carollia perspicillata*) – HO, VC
36. Gray Short-tailed Bat (*Carollia subrufa*) – CU
37. Common Vampire Bat (*Desmodus rotundus*) – VC
38. White-winged Vampire Bat (*Diaemus youngii*) – CU
39. Brown Long-tongued Bat (*Glossophaga commissarisi*) – HO
40. Gray's Long-tongued Bat (*Glossophaga leachii*) – VC
41. Common Big-eared Bat (*Micronycteris microtis*) – MV, TE
42. Central American Fringe-lipped Bat (*Trachops coffini*) – VC
43. Spectral Bat (*Vampyrum spectrum*) – HO
44. Intermediate Fruit-eating Bat (*Artibeus intermedius*) – CU, MV

45. Jamaican Fruit-eating Bat (*Artibeus jamaicensis*) – CU, VC, MV
46. Great Fruit-eating Bat (*Artibeus lituratus*) – CU, VC, MV, TE
47. Pygmy Fruit-eating Bat (*Dermanura phaeotis*) – HO, VC
48. Toltec Fruit-eating Bat (*Dermanura tolteca*) – VC, MV
49. Thomas's Fruit-eating Bat (*Dermanura watsoni*) – HO, VC
50. Salvin's Big-eyed Bat (*Chiroderma salvini*) – TE
51. Heller's Broad-nosed Bat (*Platyrrhinus helleri*) – VC, TE
52. Pacific Tent-making Bat (*Uroderma convexum*) – TE
53. Northern Yellow-shouldered Bat (*Sturnira parvidens*) – CU
54. Brazilian Serotine (*Neoeptesicus brasiliensis*) – MV
55. Northern Olingo (*Bassaricyon gabbii*) – MV
56. White-nosed Coati (*Nasua narica*) – MV, TE
57. Kinkajou (*Potos flavus*) – MV
58. Northern Raccoon (*Procyon lotor*) – TE
59. Ocelot (*Leopardus pardalis*) – TE
60. Central American Tapir (*Tapirus bairdii*) – TE
61. Collared Peccary (*Pecari tajacu*) – MV

Species I missed

Remarkably, Central American Dwarf Squirrel and Watson's Climbing Rat were the only major targets I was expecting to see but didn't. Both are not difficult at Monteverde and Tenorio, so I just wasn't lucky (and perhaps didn't give the former enough time). I'd have loved to see Slender Harvest Mouse, Orange-throated Bat, Wrinkle-faced Bat, several new molossids, or Southern Spotted Skunk in Guanacaste but none were likely given the suboptimal mistnetting conditions and/or short time. Central American Red Brocket are seen from time to time in Monteverde, but seem very hard to target. Finally, although not target species, I was surprised to miss both Sloths and Mexican Hairy Porcupine everywhere, and I'd have liked to see a Northern Tamandua.