Description of the carnivore trait data compiled for this study. Each row contains a trait, a short description of that trait, what units it is measured in, the original source for these data, and additional notes. Trait code details the column name in the csv file. Trait description gives a short description of the variable, but see the original sources for more information if needed. Units are the measurement for a particular trait. Binary variables are represented as factors in the dataset. The original source unless specified as from this study mentions where these data are originally from. Although cited in the main text, these data are from PanTHERIA, EltonTraits, AnAge, Amniote Life History Database (ALHD). Additional spatial layers from the International Union for the Conservation of Nature’s Red List of Threatened Species (IUCN RedList), WorldPop, WorldClim, and The Nature Conservancy (TNC) were used to create additional variables, with credit given to these sources in the Original source column. All taxonomic variables (family names) were taken from the Mammal Diversity Database (MDD). If the trait values were heavily skewed, the trait was log transformed before modeling as mentioned in the Notes column and depicted in the modeling code provided.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trait code** | **Trait description** | **Units** | **Original source** | **Notes** |
| label | Assessed zoonotic host status based on the literature | binary | Literature search and GIDEON |  |
| AdultForearmLen\_mm | Length from elbow to wrist | mm | PanTHERIA |  |
| AgeAtEyeOpening\_d | Age at first eye opening | days | PanTHERIA |  |
| AgeAtFirstBirth\_d | Age at which the first young are delivered | days | PanTHERIA |  |
| BasalMetRate\_mL02hr | Basal metabolic rate of individuals | mL O2/hr | PanTHERIA | log transformed |
| DispersalAge\_d | Age at which young leave parent or social group | days | PanTHERIA | log transformed |
| HomeRange\_km2 | Size of home range of individuals or groups | km2 | PanTHERIA | log transformed |
| HomeRangeIndiv\_km2 | Size of home range of individuals | km2 | PanTHERIA | log transformed |
| NeonateHeadBodyLen\_mm | Length from nose to base of the tail of recently birthed infants or near term embryos | mm | PanTHERIA | log transformed |
| PopulationDensity\_nkm2 | Number of individuals within 1 km2 | count/km2 | PanTHERIA | log transformed |
| PopulationGrpSize\_n | Number of individuals within a group | count | PanTHERIA | log transformed |
| SexualMaturityAge\_d | Age at sexual maturity | days | PanTHERIA |  |
| SocialGrpSize\_n | Social group size | count | PanTHERIA |  |
| TeatNumber\_n | Number of teats present | count | PanTHERIA |  |
| TrophicLevel\_cat | Trophic level determined based on any dietary information | categorical | PanTHERIA |  |
| WeaningBodyMass\_g | Weight at weaning | g | PanTHERIA | log transformed |
| WeaningHeadBodyLen\_mm | Head and body length at weaning | mm | PanTHERIA |  |
| AETMean\_mm | Mean monthly actual evapotranspiration rate within the species range | mm | PanTHERIA |  |
| PETMean\_mm | Mean monthly potential evapotranspiration rate within the species range | mm | PanTHERIA |  |
| Diet.Inv | Percent of diet comprised of invertebrates | percent | EltonTraits |  |
| Diet.Vend | Percent of diet comprised of endothermic vertebrates | percent | EltonTraits |  |
| Diet.Vect | Percent of diet comprised of ectothermic vertebrates | percent | EltonTraits |  |
| Diet.Vfish | Percent of diet comprised of fishes | percent | EltonTraits |  |
| Diet.Vunk | Percent of diet comprised of unknown or general vertebrates | percent | EltonTraits |  |
| Diet.Scav | Percent of diet scavenged | percent | EltonTraits |  |
| Diet.Fruit | Percent of diet comprised of fruit | percent | EltonTraits |  |
| Diet.Nect | Percent of diet comprised of nectar | percent | EltonTraits |  |
| Diet.Seed | Percent of diet comprised of seeds | percent | EltonTraits |  |
| Diet.Plant0 | Percent of diet comprised of plant matter | percent | EltonTraits |  |
| ForStrat.ground | Forages on the ground (or inland waters) | percent | EltonTraits |  |
| ForStrat.understory | Forages below 2m in the forest | percent | EltonTraits |  |
| ForStrat.arboreal | Forages in trees | binary | EltonTraits | Changed from percentage to a binary |
| ForStrat.aerial | Forages above vegetation or structures | binary | EltonTraits | Changed from percentage to a binary |
| ForStrat.marine | Forages in open oceanic bodies | binary | EltonTraits | Changed from percentage to a binary |
| BodyMass.Value | Body mass | g | EltonTraits | log transformed |
| Activity.Nocturnal | Active during the night | binary | EltonTraits |  |
| Activity.Crepuscular | Active during twilight | binary | EltonTraits |  |
| Activity.Diurnal | Active during the day | binary | EltonTraits |  |
| infantMortalityRate\_per\_year | Infant mortality rate | count | AnAge |  |
| mortalityRateDoublingTime\_y | Mortality rate doubling time | years | AnAge |  |
| metabolicRate\_W | Basal metabolic rate | W | AnAge | log transformed |
| temperature\_K | Typical body temperature | K | AnAge |  |
| female\_maturity\_d | Time to maturity - females | days | ALHD | log transformed |
| male\_maturity\_d | Time to maturity - males | days | ALHD | log transformed |
| weaning\_d | Weaning duration | days | ALHD | log transformed |
| gestation\_d | Gestation time | days | ALHD | log transformed |
| litter\_or\_clutch\_size\_n | Size of litter | count | ALHD |  |
| litters\_or\_clutches\_per\_y | Number of litters in a year | count | ALHD |  |
| inter\_litter\_or\_interbirth\_interval\_y | Time between litters | years | ALHD |  |
| birth\_or\_hatching\_weight\_g | Weight at birth | g | ALHD | log transformed |
| weaning\_weight\_g | Weight at weaning | g | ALHD | log transformed |
| longevity\_y | Mean longevity | years | ALHD |  |
| maximum\_longevity\_y | Maximum longevity observed for any individual | years | ALHD |  |
| female\_body\_mass\_g | Body mass of a female individual | g | ALHD | log transformed |
| male\_body\_mass\_g | Body mass of a male individual | g | ALHD | log transformed |
| adult\_svl\_cm | Snout vent length of adults | cm | ALHD | log transformed |
| RangeArea\_km2 | Size of the species’ range | km2 | IUCN RedList | log transformed |
| WWFMHT\_n | Number of WWF Major Habitat Types the range intersects | count | TNC |  |
| MaxLatitude\_WGS84dd | Maximum latitude of the species’ range | decimal degrees | IUCN RedList |  |
| MinLatitude\_WGS84dd | Minimum latitude of the species’ range | decimal degrees | IUCN RedList |  |
| RangeLatitude\_WGS84dd | Span of latitude covered by the species’ range | decimal degrees | IUCN RedList |  |
| CentroidLatitude\_WGS84dd | Latitude of the centroid of the species’ range | decimal degrees | IUCN RedList |  |
| HumanPopulationDensityMean\_n | Mean human population density within a species’ range | count | WorldPop | log transformed |
| HumanPopulationDensityMin\_n | Minimum human population density in the species’ range | count | WorldPop | log transformed |
| HumanPopulationDensityMax\_n | Maximum human population density in the species’ range | count | WorldPop | log transformed |
| HumanPopulationDensityMedian\_n | Median human population density in the species’ range | count | WorldPop | log transformed |
| HumanPopulationDensity10perc\_n | Top 10% of human population density values in the species’ range | count | WorldPop | log transformed |
| TemperatureMean\_dC | Mean temperature documented within the species’ range | Celsius | WorldClim |  |
| TemperatureMin\_dC | Minimum temperature within a species’ range  | Celsius | WorldClim |  |
| TemperatureMax\_dC | Maximum temperature within a species’ range | Celsius | WorldClim |  |
| TemperatureRange\_dC | Temperature range within a species’ range | Celsius | WorldClim |  |
| PrecipitationMean\_mm | Mean precipitation within a species’ range | mm | WorldClim |  |
| PrecipitationMin\_mm | Minimum precipitation within a species’ range | mm | WorldClim |  |
| PrecipitationMax\_mm | Maximum precipitation within a species’ range | mm | WorldClim |  |
| PrecipitationRange\_mm | Precipitation range within a species’ range | mm | WorldClim |  |
| MassSpecificProduction | Mass specific production |  | This study | Calculated from a formula by Hamilton et al. 2010; log transformed |
| Dindex | Defensibility index – ratio of day range length by home range size  |  | This study | Calculated according to Mitani and Rodman 1979; log transformed |
| HomeRangeScaled\_km2\_g | Home range size scaled by adult body mass | km2/g | This study | log transformed |
| dietBreadth\_n | Number of nonzero diet categories | count | EltonTraits |  |
| IUCNForest | Species associated with forest | binary | IUCN RedList |  |
| IUCNSavanna | Species associated with savanna | binary | IUCN RedList |  |
| IUCNShrubland | Species associated with shrubland | binary | IUCN RedList |  |
| IUCNGrassland | Species associated with grassland | binary | IUCN RedList |  |
| IUCNWetlands | Species associated with wetlands | binary | IUCN RedList |  |
| IUCNRockyAreas | Species associated with rocky areas | binary | IUCN RedList |  |
| IUCNCaves | Species associated with caves | binary | IUCN RedList |  |
| IUCNDesert | Species associated with desert | binary | IUCN RedList |  |
| IUCNMarineNeritic | Species associated with marine nertitic habitats | binary | IUCN RedList |  |
| IUNCMarineOceanic | Species associated with marine oceanic habitats | binary | IUCN RedList |  |
| IUCNMarineDeepBenthic | Species associated with marine deep benthic habitats | binary | IUCN RedList |  |
| IUCNMarineIntertidal | Species associated with marine intertidal habitats | binary | IUCN RedList |  |
| IUCNMarineCoastal | Species associated with marine coastal habitats | binary | IUCN RedList |  |
| IUCNArtificialTerrestrial | Species associated with artificial terrestrial habitats | binary | IUCN RedList |  |
| IUCNArtificialAquatic | Species associated with artificial aquatic habitats | binary | IUCN RedList |  |
| IUCNIntroducedVegetation | Species associated with introduced vegetation | binary | IUCN RedList |  |
| WWF\_TropicalSubtropicalMoistBroadleafForests | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TropicalSubtropicalDryBroadleafForests | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TemperateBroadleadMixedForests | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TropicalSubtropicalGrasslandsSavannasShrublands | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TemperateGrasslandsSavannasShrublands | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_MontaneGrasslandsShrublands | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_Tundra | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_Mangroves | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_FloodedGrasslandsSavannas | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_MediterraneanForestsWoodlandsScrub | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_DesertsXericShrublands | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TropicalSubtropicalConiferousForests | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_TemperateConiferForests | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_InlandWater | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_RockIce | Species range intersects with this major habitat type | binary | TNC |  |
| WWF\_BorealForestsTaiga | Species range intersects with this major habitat type | binary | TNC |  |
| Ailuridae | Is part of family Ailuridae | binary | MDD |  |
| Mephitidae | Is part of family Mephitidae | binary | MDD |  |
| Mustelidae | Is part of family Mustelidae | binary | MDD |  |
| Procyonidae | Is part of family Procyonidae | binary | MDD |  |
| Odobenidae | Is part of family Odobenidae | binary | MDD |  |
| Otariidae | Is part of family Otariidae | binary | MDD |  |
| Phocidae | Is part of family Phocidae | binary | MDD |  |
| Ursidae | Is part of family Ursidae | binary | MDD |  |
| Canidae | Is part of family Canidae | binary | MDD |  |
| Felidae | Is part of family Felidae | binary | MDD |  |
| Prionodontidae | Is part of family Prionodontidae | binary | MDD |  |
| Nandiniidae | Is part of family Nandiniidae | binary | MDD |  |
| Eupleridae | Is part of family Eupleridae | binary | MDD |  |
| Herpestidae | Is part of family Herpestidae | binary | MDD |  |
| Hyaenidae | Is part of family Hyaenidae | binary | MDD |  |
| Viverridae | Is part of family Viverridae | binary | MDD |  |
| num\_zoonoses | Number of unique species-disease associations | count | Literature search and GIDEON |  |
| WOSHits\_n | Number of publications queried by a Web of Science topic (title and abstract) search for a species and synonyms | count | This study |  |