# Metadata for HormoneBase

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**General Description:**
The HormoneBase database contains compiled measures of steroid hormone levels (androgens and glucocorticoids) from free-living populations of vertebrates to facilitate large-scale comparative analyses.

**Taxonomic Coverage:**
All relevant data from vertebrates (Kingdom: Animalia, Phylum: Chordata) were included, and classified into one of five vertebrate taxonomic groups: Birds, Reptiles, Mammals, Amphibians, Fish.

**Methods:**

Studies were selected for inclusion if they contained data on circulating glucocorticoids (baseline and or stress-induced corticosterone/cortisol) or androgens (testosterone/11-ketotestosterone) that: (i) were from free-living populations, (ii) were collected from adults that had not been subject to an experimental manipulation prior to sampling (e.g., of hormones or the environment), (iii) measured plasma levels, (iv) did not pool data across males and females, or across adults and juveniles, and (v) were reported in or could be converted to a standard unit of measurement (ng/mL). Published values were obtained from text, tables, or supplementary materials, or extracted from published figures using the program Data Thief III. When papers did not directly report the coefficient of variation, it was calculated from the standard deviation or standard error and sample size. Additional information can be found in the associated data paper.

**Dataset Description:**

Three files are provided: (1) HormoneBase_v1.csv, (2) HormoneBase_references_v1.csv, (3) HormoneBase_metadata.pdf

**Table of Variables:**

| Variable name | Variable definition | Data type/unit |
| --- | --- | --- |
| Vert_Group | Taxonomic group (amphibian, bird, fish, mammal, reptile) | String |
| Genus | Genus | String |
| Species | Species | String |
| Common_name | Common name | String |
| Population_1 | Name of first location at which samples were collected (city/region, state/province, country) | String |
| Population_2 | If applicable, name of second location at which samples were collected | String |
| Population_3 | If applicable, name of third location at which samples were collected | String |
| Latitude | Latitude of primary sampling location | Degrees decimal |
| Longitude | Longitude of primary sampling location | Degrees decimal |
| LatLongEst | Were latitude and longitude reported in the paper or estimated by data entry team? | Binary (Reported/Estimated) |
| Elevation | Elevation at primary sampling location | Numerical (in m) |
| Years | Year(s) during which study was conducted | Year |
| Year_1 | First year of study | Year |
| Year_final | Final year of study | Year |
| Breeding_Cycle | Data collected during breeding, non-breeding, or both | Breeding/Nonbreeding/Breeding, Nonbreeding |
| Moult | Measurements were collected during molt | Binary (Y/N) |
| Life_Stage | Life history sub-stage (when provided): Prebreeding, Courtship, Incubation, Copulation, Gravid/Pregnant, Non-Gravid/Pregnant, Laying, Young care, Lactation, Post-breeding, Migration, Torpor, Hibernation, Pre-basic molt. If hormones were measured for a distinct morph or social status, indicated here | String |
| LifeHistConf | Sampled individuals were confirmed to be in the designated life history stage | Binary (Y/N) |
| Jan_Sampled | Measures were collected in January | Binary (Y/N) |
| Feb_Sampled | Measures were collected in February | Binary (Y/N) |
| Mar_Sampled | Measures were collected in March | Binary (Y/N) |
| Apr_Sampled | Measures were collected in April | Binary (Y/N) |
| May_Sampled | Measures were collected in May | Binary (Y/N) |
| June_Sampled | Measures were collected in June | Binary (Y/N) |
| July_Sampled | Measures were collected in July | Binary (Y/N) |
| Aug_Sampled | Measures were collected in August | Binary (Y/N) |

| | | |
|---|---|---|
| **Sept_Sampled** | Measures were collected in September | Binary (Y/N) |
| **Oct_Sampled** | Measures were collected in October | Binary (Y/N) |
| **Nov_Sampled** | Measures were collected in November | Binary (Y/N) |
| **Dec_Sampled** | Measures were collected in December | Binary (Y/N) |
| **Time_min** | Beginning of sampling window | Time (24h:min) |
| **Time_max** | End of sampling window | Time (24h:min) |
| **CaptureMethod** | Method of capture | String |
| **SampleMethod** | Sampling active (known time to sampling, no attractants), passive (captured for unknown period before sampling), or attractant (captured with aid of playback, baited traps, etc.) | Active, Passive, Attractant |
| **MaxLatency_A** | Maximum sampling latency for androgens | Numerical (min) |
| **MaxLatency_Cort** | Maximum sampling latency for baseline glucocorticoids | Numerical (min) |
| **LateStressCort** | Latency between capture and stress-induced sample | Numerical (min) |
| **StressorType** | Type of stressor applied (baseline to stress-induced) | String |
| **MajorStressPop** | Major stressor experienced by population (if relevant) | String |
| **Method** | Assay method | String |
| **A_AntibodyKit** | Kit or antibody used for androgen assays | String |
| **Cort_AntibodyKit** | Kit or antibody used for cort assays | String |
| **CORT** | Glucocorticoid measured | Binary (corticosterone/ cortisol) |
| **Androgen** | Androgen measured | Binary (testosterone/ 11-ketotestosterone) |
| **M_A_ Mean** | Males - mean androgen concentration | Numerical (ng/mL) |
| **M_A_SE** | Males - Standard error of androgens | Numerical |
| **M_A_CV** | Males - Coefficient of variation in androgens | Numerical |
| **M_A_N** | Males - Sample size for androgens | Numerical |
| **M_A_Min** | Males - Minimum reported androgen value | Numerical (ng/mL) |
| **M_A_Max** | Males - Maximum reported androgen value | Numerical (ng/mL) |
| **M_A_RemoveOutlier** | Males - Were androgen outliers removed? | Binary (Y/N) |
| **F_A_Mean** | Females - Mean androgen concentration | Numerical (ng/mL) |
| **F_A_SE** | Females - Standard error of androgens | Numerical |
| **F_A_CV** | Females - Coefficient of variation in androgens | Numerical |
| **F_A_N** | Females - Sample size for androgens | Numerical |
| **F_A_Min** | Females - Minimum reported androgen value | Numerical (ng/mL) |
| **F_A_Max** | Females - Maximum reported androgen value | Numerical (ng/mL) |
| **F_A_RemoveOutlier** | Females - Were androgen outliers removed? | Binary (Y/N) |
| **M_BC_Mean** | Males - mean baseline cort concentration | Numerical (ng/mL) |
| **M_BC_SE** | Males - Standard error of baseline cort | Numerical |
| **M_BC_CV** | Males - Coefficient of variation in baseline cort | Numerical |
| **M_BC_N** | Males - Sample size for baseline cort | Numerical |
| **M_BC_Min** | Males - Minimum reported value of baseline cort | Numerical (ng/mL) |
| **M_BC_Max** | Males - Maximum reported value of baseline cort | Numerical (ng/mL) |
| **M_BC_RemoveOutlier** | Males - Were baseline cort outliers removed? | Binary (Y/N) |
| **F_BC_Mean** | Females - Mean baseline cort concentration | Numerical (ng/mL) |
| **F_BC_SE** | Females - Standard error of baseline cort | Numerical |
| **F_BC_CV** | Females - Coefficient of variation in baseline cort | Numerical |
| **F_BC_N** | Females - Sample size for baseline cort | Numerical |
| **F_BC_Min** | Females - Minimum reported value of baseline cort | Numerical (ng/mL) |
| **F_BC_Max** | Females - Maximum reported value of baseline cort | Numerical (ng/mL) |
| **F_BC_RemoveOutlier** | Females – Were baseline cort outliers removed? | Binary (Y/N) |
| **M_SC_Mean** | Males - Mean stress-induced cort concentration | Numerical (ng/mL) |
| **M_SC_SE** | Males - Standard error of stress-induced cort | Numerical |
| **M_SC_CV** | Males - Coefficient of variation in stress-induced cort | Numerical |
| **M_SC_N** | Males - Sample size for stress-induced cort | Numerical |
| **M_SC_Min** | Males - Minimum reported value of stress-induced cort | Numerical (ng/mL) |
| **M_SC_Max** | Males - Maximum reported value of stress-induced cort | Numerical (ng/mL) |
| **M_SC_RemoveOutlier** | Males - Were stress-induced cort outliers removed? | Binary (Y/N) |
| **F_SC_Mean** | Females - Mean stress-induced cort concentration | Numerical (ng/mL) |
| **F_SC_SE** | Females - Standard error of stress-induced cort | Numerical |
| **F_SC_CV** | Females - Coefficient of variation in stress-induced cort | Numerical |
| **F_SC_N** | Females - Sample size for stress-induced cort | Numerical |

| F_SC_Min | Females - Minimum reported value of stress-induced cort | Numerical (ng/mL) |
|---|---|---|
| F_SC_Max | Females - Maximum reported value of stress-induced cort | Numerical (ng/mL) |
| F_SC_RemoveOutlier | Females – Were stress-induced cort outliers removed? | Binary (Y/N) |
| OutlierCriteria | Criteria for removing outliers | String |
| Notes | Notes on data | String |
| Lab_ID | PI of lab where assays conducted, if specified; if unspecified, arbitrarily assigned to one of the collaborating endocrine labs | String |
| Ref_ID | Reference to data source | Code |