



INSTITUTE FOR XENOARCHAEOLOGICAL STUDIES: THE XENOARCHAEOLOGIST

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Classifying, Naming, and Identifying Humanoid Species for Xenoarchaeological Purposes

We begin with the use of the following standard for the definition of humanoid form:

- A form capable of procreation through direct conjugation or minimal genetic or physical manipulation that produces living and fertile offspring that can be characterized as humanoid and bear resemblance to their parent organisms
- A form whose cranium is in direct line with its spinal column and locomotive organ(s) that are identical to or mimic the basic movements of a bipedal form of motion (there are some forms with more than 2 legs that mimic this form of movement)
- A form with opposable digits capable of manufacture and manipulation of complex objects and tools

Due to the complexity of life forms throughout the galaxy and the often blurred lines between what characterizes human from humanoid from non-humanoid, we could propose a number of classification schemes, but in order to maintain some level of consistency, the following guidelines are suggested:

- Any humanoid species should be characterized by the identifier *Homo* to identify them as humanoids
- *Recombi*- should be used for genetically engineered species
- Any sentient race should be recognized by the species identifier *sapiens*
- The species planet of origin or origin race should be included in the identification (such as *vulcanis* for Vulcans or *rihannsu* for Romulans)
- For species like the Jem'Hadar that have quadrant-specific species characteristics, the terms *alphaii*, *betaii*, *deltaii*, and *gammai* are suggested
- Shapeshifters, due to the complexity of their biology, are afforded a special classification scheme in an as yet unidentified Kingdom [current scientific theory indicates their cell structure places them in the Superkingdom *Eukarya* and in the Kingdom *Animalia* into a genus or genera: *Homoallasomorphien*

An examination of the classification system is appropriate for any proper study of Xenoarchaeological Sciences - we use a modified classification system that is based upon classical taxonomic terms defined by: Carolus Linnaeus, Antoine-Laurent de Jussieu, Georges Leopold Cuvie, Ernst Haeckel, Herbert F. Copeland, and Robert H. Whittaker

Modern Taxonomy classifies species according to their physical and genetic characteristics. The classification scheme, from broadest to most narrowly defined, is subdivided into the following scheme:

Superkingdom

Kingdom

Subkingdom (and Division)

Phylum

Subphylum

Superclass

Class

Order (including Suborder and Infraorder)

Superfamily, Family, and Subfamily

Genus

Species

Classical Taxonomy defines two Superkingdoms:
Prokarya (Prokaryotes)
Eukarya (Eukaryotes)

Modern Taxonomy defines four Superkingdoms:
Inkarya [formerly Inorgia], consisting of species based on non-carbon elements
Ekarya [formerly Energia], consisting of species based on the electromagnetic spectrum of energy
Prokarya [Prokaryotes]
Eukarya [Eukaryotes, Eucaryotae]

Each superkingdom will be examined for its divisions and, where applicable, the classification of the known sentient species will be included within each set of taxa.

Superkingdom Inkarya

Inkarya is a recent addition to the list of Superkingdoms, and given how few inorganic life forms have been discovered, it is first necessary to define organic versus inorganic life.

Simply put, organic life is based upon the element carbon, inorganic life is based upon any other element(s).

Examination of the periodic table suggests that the following elements share in common with carbon a tetrabonding characteristic that appears to impart compatibility with genetically driven life:

Carbon [organic]

Silicon [silaganic]

Germanium [gerganic]

Tin and lead have been shown to be too unstable in their bonding characteristics and have been recently removed from the list of elements believed to be bioforming.

Analysis of the current database of life forms reveals the following phyla of Superkingdom *Inkarya* [no subdivision of *Inkarya* into any Kingdom exists]:

Phylum *Deuganiae* (based on liquid deuterium)

Phylum *Siliganiae* (based on silicon compounds)

Phylum *Gerganiae* (based on germanium compounds)

Phylum *Metallorganiae* (based on combinations of metals with or without carbon, including crystalline forms and mineral-based life), which includes the classes:

Metallia [species derives from metallic elements]

Metallorgania [species derived from both metallic and organic components] which includes a single infraorder:

Metallorgaminidae [reserved for androids based on humanoid form] which includes a single family:

Cyberoidea which include(s) the modern genera

Cyber / Cybersapien / Cybersapiens

Crystallia [species bases on crystalline forms]

Phylum *Iogasioiae* [based on various forms of ionized or non-ionized gas]

Superkingdom Ekarya

No subdivision for Ekarya has been defined; a single phylum is included for those sentient life forms within *Ekarya*:

Photoria [photonic life forms such as holographic life] which includes a single (infra)order:

Photonidae which includes a single family:

Photoidea, which include(s) the modern genera

Photo / Photosapien / Photosapiens

Hologram

Superkingdom Prokarya [Prokaryotes]

Prokarya is the superkingdom consisting of non-nucleated single celled organisms. Prokaryotic forms are considered to be the most basic biologic life forms and in most instances the earliest forms of life on most worlds.

Within *Prokarya* is the single Kingdom *Bacteria* [*Prokaryotae*, *Procaryote*, *Monera*]

Bacteria consists of two subkingdoms:

Subkingdom *Archaea* – consisting of methanogens, thermacidophiles, halophiles, and some gram-positive bacteria, divided into a single division

Division *Mendosicutes* [*deficient-walled Archaeobacteria*] containing the Phyla:

Phylum *Euryarchaeota*

Phylum *Crenarchaeota*

Subkingdom *Eubacteria* – consisting of gram negative and most other bacteria, divided into three divisions:

Division *Gracilicutes* [*gram negative bacteria*], divided into the phyla:

Phylum *Proteobacteria*

Phylum *Spirochaetae*

Phylum *Cyanobacteria*

Phylum *Saprospirae*

Phylum *Chloroflexa*

Phylum *Chlorobia*

Division *Tenericutes* [*wall-less bacteria*], divided into a single phylum:

Phylum *Aphragmabacteria*

Division *Firmicutes* [*gram positive and protein-walled bacteria*], divided into the phyla:

Phylum *Endospora*

Phylum *Pirellulae*

Phylum *Actinobacteria*

Phylum *Deinococci*

Phylum *Thermotogae*

No further taxa within *Prokarya* will be discussed in this classification.

Superkingdom Eukarya [Eukaryotae, Eukaryotes]

The Eukaryotic superkingdom is certainly the more advanced (or perhaps more accurately most complex) of the forms of life throughout the universe. It is the most biodiverse and is based upon cellular forms with the following characteristics:

- a membrane bound nucleus
- symbiogenesis with simple prokaryotic cells (i.e. dual genetic information contained within a nucleus and a number of cell organelles)
- cell and tissue complexity lacking in prokaryotic cells

The superkingdom *Eukarya* is divided into a number of kingdoms:

Kingdom *Protoctista*, subdivided into the phyla:

Phylum *Archaeoprotista*

Phylum *Microspora*

Phylum *Rhizopoda*

Phylum *Granuloreticulosa*

Phylum *Xenophyophora*
Phylum *Myxomycota*
Phylum *Dinomastigota*
Phylum *Ciliophora*
Phylum *Apicomplexa*
Phylum *Haptomonada*
Phylum *Cryptomonada*
Phylum *Discomitochondria*
Phylum *Chrysomonada*
Phylum *Xanthophyta*
Phylum *Eustigmatophyta*
Phylum *Diatoms*
Phylum *Phaeophyta*
Phylum *Labyrinthulata*
Phylum *Plasmodiophora*
Phylum *Oomycota*
Phylum *Hyphochytriomycota*
Phylum *Haplospora*
Phylum *Paramyxa*
Phylum *Myxospora*
Phylum *Rhodophyta*
Phylum *Gamophyta*
Phylum *Actinopoda*
Phylum *Chlorophyta*
Phylum *Chytridiomycota*
Phylum *Zoomastigota*

Kingdom *Fungi*, subdivided into the phyla:

Phylum *Zygomycota*
Phylum *Basidiomycota*
Phylum *Ascomycota*

Kingdom *Plantae*, subdivided into the phyla:

Phylum *Bryophyta* [mosses]
Phylum *Haptophyta* [liverworts]
Phylum *Anthocerophyta* [hornworts]
Phylum *Lycophyta* [lycopods, clubmosses, spike mosses]
Phylum *Psilophyta* [whisk ferns and psilopsids]
Phylum *Sphenophyta* [horsetails]
Phylum *Filicinophyta* [ferns]
Phylum *Cycadophyta* [cycads]
Phylum *Ginkgophyta* [mandenhair]
Phylum *Coniferophyta* [conifers]
Phylum *Gnetophyta* [gnetophytes]
Phylum *Anthophyta* [flowering plants]

Kingdom *Animalia*, subdivided into two subkingdoms:

Subkingdom *Parazoa* – consisting of two phyla that lack tissues organized into defined organs and lack specific form:

Phylum *Placozoa* [trickoplaxes]

Phylum *Porifera* [sponges]

Subkingdom *Eumetazoa*

The *Eumetazoa* are those organisms, of which all known sentient species of organic nature are classified

[a number of these will be further divided into their specific taxa]

Most *Eumetazoa* consist of species which have tissues organized into organs or organ systems, consisting of the phyla:

Phylum *Cnidaria* [hydras and jellyfish]

Phylum *Ctenophora* [comb jellies]

Phylum *Platyhelminthes* [flatworms], which includes the classes

Turbellaria [planarians]

Trematoda [flukes]

Cestoda [tapeworms]

Phylum *Gnathostomulida* [jaw worms]

Phylum *Rhombozoa* [dicyemids and heterocyemids]

Phylum *Orthonectida* [orthonectids]

Phylum *Nemertina* [nemertines and ribbon worms]

Phylum *Nematoda* [thread and round worms]

Phylum *Nematomorpha* [Gordian and horsehair worms]

Phylum *Acanthocephala* [thorny-headed worms]

Phylum *Rotifera* [rotifers]

Phylum *Kinorhyncha* [kinorhynchs]

Phylum *Priapulida* [priapulids]

Phylum *Gastrotricha* [gastrotrichs]

Phylum *Loricifera* [loriciferans]

Phylum *Entoprocta* [entoprocts]

Phylum *Chelicerata* [chelicerates and arachnids – horseshoe crabs, spiders et.al., sea spiders], which includes the classes

Merostomata [horseshoe crabs]

Pycnogonida [sea spiders]

Arachnida [spiders, scorpions, mites, ticks, chiggers]

Phylum *Mandibulata* [*Uniramia* - insects, centipedes, millipedes], which includes the classes

Hexapoda [insects]

Chilopoda [centipedes]

Diplopoda [millipedes]

Phylum *Crustacea* [crustaceans and pentastomes]

Phylum *Annelida* [annelid worms], which includes the classes

Oligochaeta [earthworms]

Polychaeta [lugworms]

Hirudinaea [leeches]

Phylum *Sipuncula* [peanut worms]

Phylum *Echiura* [spoon-worms]

Phylum *Pogonophora* [beard and tube worms]

Phylum *Mollusca* [molluscs], which includes the classes

Gastropoda [snails and slugs]

Bivalvia [oysters, clams]

Cephalopoda [squid, octopus]

Phylum *Tardigrada* [water bears]
Phylum *Onychophora* [velvet worms and peripatuses]
Phylum *Bryozoa* [moss animals]
Phylum *Brachiopoda* [lampshells]
Phylum *Phoronida* [phoronids]
Phylum *Chaetognatha* [arrow worms]
Phylum *Hemichordata* [acorn worms]
Phylum *Echinodermata* [sea urchins, sea stars, starfish, sea cucumbers]
Phylum *Chordata*, Sub)Phylum *Urochordata* [acraniate chordate tunicates]
Phylum *Chordata*, Sub)Phylum *Cephalochordata* [acraniate chordate lancelets]
Phylum *Chordata*, Sub)Phylum *Craniata* [craniate chordates], which includes two superclasses:
 Superclass *Agnathia* [lacking jaws and paired appendages], divided into the single class
 Cyclostomata [lampreys, hagfish]
 Superclass *Gnathostomata* [having jaws and paired appendages], divided into seven classes:
 Chondrichthyes [sharks, skates, rays] which includes an infraorder:
 Chondrichthinidae which includes the family *Chondrichthoidea* which include(s) the modern genera
 Homochondrichthien
 Homochondri
 Homochonodrichthien
 Osteichthyes [bony fishes] which includes an infraorder:
 Osteichthinidae which includes the family *Osteichthoidea* which include(s) the modern genera
 Osteichthien
 Homoostei
 Homoosteichthien
 Choanichthyes [lungfish] which includes an infraorder:
 Choanichthinidae which includes the family *Choanichthoidea* which include(s) the modern genera
 Choanichthien
 Homochoan
 Homochoanichthien
 Amphibia [amphibians], which includes an infraorder:
 Amphinidae, which includes the family *Amphinoidea* which include(s) the modern genera
 Homoamphibien
 Amphisapien
 Amphisapiens
 Reptilia [lizards, snakes, turtles], which includes an infraorder:
 Reptinidae, which includes the family *Reptinoidea* which include(s) the modern genera
 Homoreptilien
 Homosaurien
 Repsapien
 Repsapien
 Aves [feathered reptiles, i.e. birds] which includes an infraorder:
 Avinidae, which includes the family *Avinoidea* which include(s) the modern genera
 Homoavien
 Avisapien
 Avisapiens

Mammalia [mammals], further subdivided into the subclasses:

Prototheria [egg-laying mammals], which includes an infraorder:

Protothinidae, which includes the family *Protothoidea* which include(s) the modern genera

Homoprototherien

Theria [mammals that do not lay eggs], which include two infraclasses:

Metatheria [marsupials], which includes an infraorder:

Metathinidae, which includes the family *Metathoidea* which include(s) the modern genera

Homometatherien

Eutheria [placental mammals], which includes the orders:

Insectivora [hedgehogs, shrews, moles], which includes an infraorder:

Insectivinidae, which includes the family *Insectivoidea* which include(s) the modern genera

Homoinsectivien

Homoinsectivorien

Primates [lemurs, tarsiers, monkeys, apes, chimpanzees, gorillas, and in classical taxonomy humans]

Primates includes an infraorder

Hominidae, which includes the family *Hominoidea* which include(s) the modern genera

Homo (*Homosapien*)

Hyracoidea [hyraxes], which includes an infraorder:

Hyracinidae, which includes the family *Hyracinoidea* which include(s) the modern genera

Homohyracoidien

Chiroptera [bats], which includes an infraorder:

Chiroptinidae, which includes the family *Chiroptoidea* which include(s) the modern genera

Homochiroptien

Dermoptera [flying lemurs], which includes an infraorder:

Dermoptinidae, which includes the family *Dermoptoidea* which include(s) the modern genera

Homodermoptien

Rodentia [porcupines, mice, squirrels, chipmunks, capybaras], which includes an infraorder:

Rodenidae, which includes the family *Rodentoidea* which include(s) the modern genera

Homorodentien

Carnivora [dogs, cats, bears, otters], which includes an infraorder:

Carninidae, which includes the family *Carnivoidea* which include(s) the modern genera

Homocarnivien

Homocarnivorien

Pinnepedia [seals, sea lions] which includes an infraorder:

Pinnepinidae which includes the family *Pinnepoidea* which include(s) the modern genera

Homopinnipedien

Tupaioidea [tree shrews] which includes an infraorder:

Tupainidae which includes the family *Tupaioidea* which include(s) the modern genera

Homotupainien

Edentata [sloths, armadillos, anteaters], which includes an infraorder:

Edentinidae which includes the family *Edentoidea* which include(s) the modern genera

Homoedentien

Pholidota [pangolins] which includes an infraorder:

Pholidiniae which includes the family *Lagomoidea* which include(s) the modern genera

Homopholien

Lagomorpha [hares, rabbits], which includes an infraorder:

Lagominidae, which includes the family *Lagomoidea* which include(s) the modern genera
Homolagomorphien

Cetacea [whales, dolphins], which includes an infraorder:

Cetinidae, which includes the family *Cetoidea* which include(s) the modern genera
Homocetacean

Tubulidentata [aardvark], which includes an infraorder:

Tubulidinida, e which includes the family *Tubuloidea* which include(s) the modern genera
Homotubulidien

Proboscidea [elephants], which includes an infraorder:

Probosciniidae, which includes the family *Proboscoidea* which include(s) the modern genera
Homoproboscien

Sirenia [sea cows, manatees], which includes an infraorder:

Sirenidae, which includes the family *Sirenoidea* which include(s) the modern genera
Homosirenien

Perissodactyla [zebras, horses, tapirs], which includes an infraorder:

Perissinidae which includes the family *Perissoidea* which include(s) the modern genera
Homoperissien

Artiodactyla [pigs, camels, llamas, deer, cattle, bison,] which includes an infraorder:

Artionidae, which includes the family *Artioidea* which include(s) the modern genera
Homoartiodien