Yeti supplemental analysis

In addition to the six sequences in assignment 2, Sykes *et al*. (2014) provided a total of 30 sequences in their manuscript. Those 30 sequences are attached in this document along with the analysis of these sequences. Teachers may wish to supplement the six sequences in assignment 2 with some of these additional sequences. The six sequences are identified here with both their Genbank number as well as identity in assignment 2 (e.g. Yeti1).

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| --- | --- | --- | --- |
| **Assignment 2 identity** | **Genbank** | **Description** **(partial 12S ribosomal DNA; mitochondria)** | **Common name** |
|  | KJ155696.1 | *Equus caballus* isolate 25023 | Horse |
| Yeti2 | KJ155697.1 | *Ursus maritimus* isolate 25025  | Polar bear |
|  | KJ155698.1 | *Ursus arctos* isolate 25027 | Grizzly bear |
|  | KJ155699.1 | *Ursus americanus* isolate 25028 | Black bear |
|  | KJ155700.1 | *Canis* sp. isolate 25029 | Dog/wolf |
|  | KJ155701.1 | *Bos taurus* isolate 25030 | Cow |
|  | KJ155702.1 | *Procyon lotor* isolate 25035 | Raccoon |
|  | KJ155703.1 | *Equus caballus* isolate 25039 | Horse |
|  | KJ155704.1 | *Bos taurus* isolate 25040 | Cow |
|  | KJ155705.1 | *Equus caballus* isolate 25041 | Horse |
|  | KJ155706.1 | *Tapirus indicus* isolate 25044 | Tapir |
|  | KJ155707.1 | *Odocoileus* sp. isolate 25069 | Mule deer |
|  | KJ155708.1 | *Homo sapiens* isolate 25072 | Human |
|  | KJ155709.1 | *Equus caballus* isolate 25073 | Horse |
|  | KJ155710.1 | *Ursus americanus* isolate 25074  | Black bear |
|  | KJ155711.1 | *Procyon lotor* isolate 25075  | Raccoon |
|  | KJ155712.1 | *Erethizon dorsatum* isolate 25081  | Porcupine |
|  | KJ155713.1 | *Ursus americanus* isolate 25082  | Black bear |
| Yeti5 | KJ155714.1 | *Bos taurus* isolate 25086  | Cow |
| Yeti4 | KJ155715.1 | *Capricornis sumatraensis* isolate 25092  | Red serow |
|  | KJ155716.1 | *Canis* sp. isolate 25093  | Dog/wolf |
|  | KJ155717.1 | *Ursus americanus* isolate 25104  | Black bear |
|  | KJ155718.1 | *Ursus americanus* isolate 25106  | Black bear |
|  | KJ155719.1 | *Bos taurus* isolate 25112  | Cow |
|  | KJ155720.1 | *Canis* sp. isolate 25113  | Dog/wolf |
|  | KJ155721.1 | *Ovis aries* isolate 25167  | Sheep |
| Yeti1 | KJ155722.1 | *Ursus maritimus* isolate 25191  | Polar bear |
|  | KJ155723.1 | *Ursus arctos* isolate 25194  | Grizzly bear |
| Yeti3 | KJ155724.1 | *Canis* sp. isolate 25212  | Dog/wolf |
| Additional sequences that might be useful |
|  | KF982693 | *Homo sapiens* neanderthalensis isolate Okladnikov 2 mitochondrion sequence | Neanderthal |
| Yeti6 | AC025627 | *Homo sapiens* chromosome 17 | Human |
|  | KJ607607.1 | *Ursus americanus* isolate 25202  | Black bear |
|  | MG131901.1 | *Ursus arctos pruinosus* isolate 1938  | Tibetan bear |
|  | MG131902.1 | *Ursus arctos pruinosus* isolate Somani  | Tibetan bear |
|  | MG131903.1 | *Ursus arctos pruinosus* isolate Tashi  | Tibetan bear |
|  | MG131904.1 | *Ursus arctos pruinosus* isolate Chemo | Tibetan bear |

FASTA sequences from assignment 2 (without Yeti label)

>KJ155722.1 Ursus maritimus isolate 25191 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTAAACCCTCCTA

>KJ155697.1 Ursus maritimus isolate 25025 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTAAACCCTCCTA

>KJ155724.1 Canis sp. isolate 25212 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAGATAATTTTACAACAAAATAATTCGCCAGAGGACTACTAGCAATAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTATATCCCTCTA

>KJ155715.1 Capricornis sumatraensis isolate 25092 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAAATAATTGTAAAAACAAAATTATTCGCCAGAGTACTACCGGCAACAGCCCAAAACTCAAAGGACTTGGCGGTGCTTTATATCCATCTA

>KJ155714.1 Bos taurus isolate 25086 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACACAGATAATTACATAAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTATATCCTTCTA

>AC025627

CTTAGCCCTAAACTCTAATAGTTACATTAACAAAACCATTCGCCAGAGTACTACAAGCAACAGCTTAAAACTCAAAGGACTTGGCAGTGCTTTATATCCCTCTA

FASTA sequences from Sykes *et al*, 2014

>KJ155696.1\_Equus caballus isolate 25023 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACTAAAATAGCTTACCACAACAAAGCTATTCGCCAGAGTACTACTAGCAACAGCCTAAA

ACTCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155697.1\_Ursus maritimus isolate 25025 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCTCCTA

>KJ155698.1\_Ursus arctos isolate 25027 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155699.1\_Ursus americanus isolate 25028 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155700.1\_Canis sp. isolate 25029 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAGATAATTTTACAACAAAATAATTCGCCAGAGGACTACTAGCAATAGCTTAAAAC

TCAAAGGACTTGGCGGTGCTTTATATCCCTCTA

>KJ155701.1\_Bos taurus isolate 25030 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACACAGATAATTACATAAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTATATCCTTCTA

>KJ155702.1\_Procyon lotor isolate 25035 12S ribosomal RNA gene, partial sequence; mitochondrial

CCTAGCCCTAAACATAAATAATTAACGTAACAAAATTATTTGCCAGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155703.1\_Equus caballus isolate 25039 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACTAAAATAGCTTACCACAACAAAGCTATTCGCCAGAGTACTACTAGCAACAGCCTAAA

ACTCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155704.1\_Bos taurus isolate 25040 12S ribosomal RNA gene, partial sequence; mitochondrial

CTAAACACAGATAATTACATAAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCTTAAAACTCAAAG

GACTTGGCGGTGCTTTATAT

>KJ155705.1\_Equus caballus isolate 25041 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACTAAAATAGCTTACCACAACAAAGCTATTCGCCAGAGTACTACTAGCAACAGCCTAAA

ACTCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155706.1\_Tapirus indicus isolate 25044 12S ribosomal RNA gene, partial sequence; mitochondrial

CATAAACCAAAATAATCTCCATAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCCTAAAACTCAAA

GGACTTGGCGGTGCTTTATATCCCTCTA

>KJ155707.1\_Odocoileus sp. isolate 25069 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAAATAGTTATATAAACAAAACTATTCGCCAGAGTACTACCGGCAATAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTATACCCTTCTA

>KJ155708.1\_Homo sapiens isolate 25072 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACCTCAACAGTTAAATCAACAAAACTGCTCGCCAGAACACTACGAGCCACAGCTTAAAA

CTCAAAGGACCTGGCGGTGCTTCATATCCCTCTA

>KJ155709.1\_Equus caballus isolate 25073 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACTAAAATAGCTTACCACAACAAAGCTATTCGCCAGAGTACTACTAGCAACAGCCTAAA

ACTCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155710.1\_Ursus americanus isolate 25074 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155711.1\_Procyon lotor isolate 25075 12S ribosomal RNA gene, partial sequence; mitochondrial

CTAGCCCTAAACATAAATAATTAACGTAACAAAATTATTTGCCAGAGAACTACTAGCAACAGCTTAAAAC

TCAAAGGACTTGGCGGTGCTTTACATCCCTCTA

>KJ155712.1\_Erethizon dorsatum isolate 25081 12S ribosomal RNA gene, partial sequence; mitochondrial

CCTAACCATAAACATAAAAATTTCCCAACAAAAATTTTTGCCAGAGGACTACTAGCAACAGCTTAAAACT

CAAAGGACTTGACGGTGCTTACACCCATCTA

>KJ155713.1\_Ursus americanus isolate 25082 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155714.1\_Bos taurus isolate 25086 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACACAGATAATTACATAAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTATATCCTTCTA

>KJ155715.1\_Capricornis sumatraensis isolate 25092 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAAATAATTGTAAAAACAAAATTATTCGCCAGAGTACTACCGGCAACAGCCCAAAA

CTCAAAGGACTTGGCGGTGCTTTATATCCATCTA

>KJ155716.1\_Canis sp. isolate 25093 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAGATAATTTTACAACAAAATAATTCGCCAGAGGACTACTAGCAATAGCTTAAAAC

TCAAAGGACTTGGCGGTGCTTTATATCCCTCTA

>KJ155717.1\_Ursus americanus isolate 25104 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155718.1\_Ursus americanus isolate 25106 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155719.1\_Bos taurus isolate 25112 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACACAGATAATTACATAAACAAAATTATTCGCCAGAGTACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTATATCCTTC

>KJ155720.1\_Canis sp. isolate 25113 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAGATAATTTTACAACAAAATAATTCGCCAGAGGACTACTAGCAATAGCTTAAAAC

TCAAAGGACTTGGCGGTGCTTTATATCCCTCTA

>KJ155721.1\_Ovis aries isolate 25167 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACACAAATAATTATAAAAACAAAATTATTCGCCAGAGTACTACCGGCAACAGCCCGAAA

CTCAAAGGACTTGGCGGTGCTTTATACCCTTCTA

>KJ155722.1\_Ursus maritimus isolate 25191 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCTCCTA

>KJ155723.1\_Ursus arctos isolate 25194 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

>KJ155724.1\_Canis sp. isolate 25212 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCCTAAACATAGATAATTTTACAACAAAATAATTCGCCAGAGGACTACTAGCAATAGCTTAAAAC

TCAAAGGACTTGGCGGTGCTTTATATCCCTCTA

Additional FASTA sequences

>AC025627

ACTGGGATTAGATAACCCACTATGCTTAGCCCTAAACTCTAATAGTTACATTAACAAAACCATTCGCCAG

AGTACTACAAGCAACAGCTTAAAACTCAAAGGACTTGGCAGTGCTTTATATCCCTCTAGAGGAGCCTGTT

CTATAATCGA

>KF982693

ACTGGGATTAGATACCCCACTATGCTTAGCCCTAAACNTCAACAGTTAAATCAACAAAACTGCTCGCCAG

AACACTACGAGCCACAGCTTAAAACTCAAAGGACCTGGCGGTGCTTCATATCCCTCTAGAGGAGCCTGTT

CTGTAATCGA

>MG131904.1\_Ursus arctos pruinosus isolate Chemo 12S ribosomal RNA gene, partial sequence; mitochondrial

ACTGGGATTAGATACCCCACTATGCTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAG

AGAACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTAGAGGAGCCTGTT

CTATAATCGA

>MG131903.1\_Ursus arctos pruinosus isolate Tashi 12S ribosomal RNA gene, partial sequence; mitochondrial

GGGATTAGATACCCCAATAYGCTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGAGA

ACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTAGAGGAACCTGTCCTA

TAATCGACA

>MG131902.1\_Ursus arctos pruinosus isolate Somani 12S ribosomal RNA gene, partial sequence; mitochondrial

CTGGGATTAGATACCCCACTATGCTTAGCCTTAAACATAAATAATTTATTAAACAAAATTATTCGCCAGA

GAACTACTAGCAACAGCTTAAAACTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTAGAGGARCCTGTYC

TATAATCGA

>MG131901.1\_Ursus arctos pruinosus isolate 1938 hair 12S ribosomal RNA gene, partial sequence; mitochondrial

ACTGGGATTAGATACCCCACTATGCTTAGCCTTAAACGTAAATAATTTATTAAACAAAATTATTCGCCAG

AGAACTACTAGCAACAGCTTAAAACTCAAAGGAC

>KJ607607.1\_Ursus americanus isolate 25202 12S ribosomal RNA gene, partial sequence; mitochondrial

CTTAGCCTTAAACATAAGTAATTTATTAAACAAAATTATTCGCCGGAGAACTACTAGCAACAGCTTAAAA

CTCAAAGGACTTGGCGGTGCTTTAAACCCCCCTA

Alignment tree of all samples

