Notes for finest.csv

- -There are some characters that actually occur twice in the matrix, *e.g.* characters 268=380 and 275=379. Also, in some cases these guys just "renamed" structures (*i.e.* mesoscutellar ridge to mesoscutellar carina and transscutal ridge to transscutal carina) that was a pain in the butt to fix (carina is external and ridge is internal). Really sloppy work...wonder who did actually checked the dataset from the coauthors...
- -When the <u>position</u> of one structure is given relative to another structure or when I post-composed an anatomical structure or when two structures were compared, I included both HAO classes in the statement
- -presence/absence and number characters (e.g. number of palpomeres) are expressed using amount
- -"fusion" (presence/absence of conjunctiva separating two sclerites) and sclerotization level are referred as structure
- -Most common PATO terms:

-position: http://purl.obolibrary.org/obo/PATO 0000140

-amount: http://purl.obolibrary.org/obo/PATO_0000070

-shape: http://purl.obolibrary.org/obo/PATO 0000052

-structure: http://purl.obolibrary.org/obo/PATO 0000141

-thickness: http://purl.obolibrary.org/obo/PATO 0000915

-pilosity: http://purl.obolibrary.org/obo/PATO 0000066

-orientation: http://purl.obolibrary.org/obo/PATO 0000133

-size: http://purl.obolibrary.org/obo/PATO 0000117

-texture: http://purl.obolibrary.org/obo/PATO 0000150

| char_id | ontology | list_of_finest_character |
|---------|----------|---|
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| 1 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 2 | hao | http://purl.obolibrary.org/obo/HAO_0001432 |
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| 3 | hao | http://purl.obolibrary.org/obo/HAO_0000419 |
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| 7 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
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| 12 | hao | http://purl.obolibrary.org/obo/HAO_0000347 |
| 12 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
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| 13 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
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| F 4 | | Luc // Labelt |
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| 85 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
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| 86 | hao | http://purl.obolibrary.org/obo/PATO_0000140 |
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| 102 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
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| 105 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
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| 112 | hao | http://purl.obolibrary.org/obo/HAO_0000827 |
| 112 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
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| 116 | hao | http://purl.obolibrary.org/obo/HAO_0001315 |
| 116 | pato | http://purl.obolibrary.org/obo/PATO_0001334 |
| 117 | hao | http://purl.obolibrary.org/obo/HAO_0000188,http://purl.obolibrary.org/obo/HAO_0001122 |
| 117 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |

| 118 | hao | http://purl.obolibrary.org/obo/HAO_0000978,http://purl.obolibrary.org/obo/HAO_0000350 |
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| 131 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 132 | hao | http://purl.obolibrary.org/obo/HAO_0000647,http://purl.obolibrary.org/obo/HAO_0001027 |
| 132 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
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| 337 | hao | http://purl.obolibrary.org/obo/HAO_0001684 |
| 337 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 338 | hao | http://purl.obolibrary.org/obo/HAO_0000619 |
| 338 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 339 | hao | http://purl.obolibrary.org/obo/HAO_0001685 |
| 339 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 340 | hao | http://purl.obolibrary.org/obo/HAO_0002284 |
| 340 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 341 | hao | http://purl.obolibrary.org/obo/HAO_0000243 |
| 341 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 342 | hao | http://purl.obolibrary.org/obo/HAO_0001522,http://purl.obolibrary.org/obo/HAO_0000351 |
| 342 | pato | http://purl.obolibrary.org/obo/PATO_0000150 |
| 343 | hao | http://purl.obolibrary.org/obo/HAO_0000225,http://purl.obolibrary.org/obo/HAO_0000783,http://purl.obolibrary.org/obo/HAO_0000351 |
| 343 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 344 | hao | http://purl.obolibrary.org/obo/HAO_0000237,http://purl.obolibrary.org/obo/HAO_0000351 |
| 344 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 345 | hao | http://purl.obolibrary.org/obo/HAO_0000225,http://purl.obolibrary.org/obo/HAO_0000351 |

| 345 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
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| 346 | hao | http://purl.obolibrary.org/obo/HAO_0000957,http://purl.obolibrary.org/obo/HAO_0000351 |
| 346 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 347 | hao | http://purl.obolibrary.org/obo/HAO_0000967,http://purl.obolibrary.org/obo/HAO_0000351 |
| 347 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 348 | hao | http://purl.obolibrary.org/obo/HAO_0000888,http://purl.obolibrary.org/obo/HAO_0000351 |
| 348 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 349 | hao | http://purl.obolibrary.org/obo/HAO_0000093,http://purl.obolibrary.org/obo/HAO_0000351 |
| 349 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 350 | hao | http://purl.obolibrary.org/obo/HAO_0002511 |
| 350 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 351 | hao | http://purl.obolibrary.org/obo/HAO_0000225,http://purl.obolibrary.org/obo/HAO_0000400 |
| 351 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 352 | hao | http://purl.obolibrary.org/obo/HAO_0001522 |
| 352 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 353 | hao | http://purl.obolibrary.org/obo/HAO_0000967,http://purl.obolibrary.org/obo/HAO_0000400 |
| 353 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 354 | hao | http://purl.obolibrary.org/obo/HAO_0000890,http://purl.obolibrary.org/obo/HAO_0000400 |
| 354 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 355 | hao | http://purl.obolibrary.org/obo/HAO_0000170,http://purl.obolibrary.org/obo/HAO_0000400 |
| 355 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 356 | hao | http://purl.obolibrary.org/obo/HAO_0000237,http://purl.obolibrary.org/obo/HAO_0000519,http://purl.obolibrary.org/obo/HAO_0000400 |
| 356 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 357 | hao | ttp://purl.obolibrary.org/obo/HAO_0001977,http://purl.obolibrary.org/obo/HAO_0000400 |
| 357 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 358 | hao | ttp://purl.obolibrary.org/obo/HAO_0001977,http://purl.obolibrary.org/obo/HAO_0001522,http://purl.obolibrary.org/obo/HAO_0000400 |
| 358 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |

| 359 | hao | http://purl.obolibrary.org/obo/HAO_0000226,http://purl.obolibrary.org/obo/HAO_0000400 |
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| 360 | hao | http://purl.obolibrary.org/obo/HAO_0000717,http://purl.obolibrary.org/obo/HAO_0000400 |
| 360 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 361 | hao | http://purl.obolibrary.org/obo/HAO_0000903,http://purl.obolibrary.org/obo/HAO_0000400 |
| 361 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 362 | hao | http://purl.obolibrary.org/obo/HAO_0000909,http://purl.obolibrary.org/obo/HAO_0000400 |
| 362 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 363 | hao | http://purl.obolibrary.org/obo/HAO_0002069 |
| 363 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 364 | hao | http://purl.obolibrary.org/obo/HAO_0001018 |
| 364 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 365 | hao | http://purl.obolibrary.org/obo/HAO_0001053 |
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| 366 | pato | http://purl.obolibrary.org/obo/PATO_0000150 |
| 367 | hao | http://purl.obolibrary.org/obo/HAO_0001106, |
| 367 | pato | http://purl.obolibrary.org/obo/HAO_0000903 |
| 368 | hao | http://purl.obolibrary.org/obo/HAO_0001121 |
| 368 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 369 | hao | http://purl.obolibrary.org/obo/HAO_0000933,http://purl.obolibrary.org/obo/HAO_0001351 |
| 369 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 370 | hao | http://purl.obolibrary.org/obo/HAO_0002069 |
| 370 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 371 | hao | http://purl.obolibrary.org/obo/HAO_0000933,http://purl.obolibrary.org/obo/HAO_0000350 |
| 371 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 372 | hao | http://purl.obolibrary.org/obo/HAO_0000933,http://purl.obolibrary.org/obo/HAO_0000631 |
| 372 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 373 | hao | http://purl.obolibrary.org/obo/HAO_0001686,http://purl.obolibrary.org/obo/HAO_0001351 |
| 373 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
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| 374 | hao | http://purl.obolibrary.org/obo/HAO_0001456 |
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| 374 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 375 | hao | http://purl.obolibrary.org/obo/HAO_0000057,http://purl.obolibrary.org/obo/HAO_0000037,http://purl.obolibrary.org/obo/HAO_0000058,http://purl.obolibrary.org/obo/HAO_0000038 |
| 375 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 376 | hao | http://purl.obolibrary.org/obo/HAO_0000378 |
| 376 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 377 | hao | http://purl.obolibrary.org/obo/HAO_0002497 |
| 377 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 378 | hao | http://purl.obolibrary.org/obo/HAO_0001538,http://purl.obolibrary.org/obo/HAO_0001418,http://purl.obolibrary.org/obo/HAO_0001536,http://purl.obolibrary.org/obo/HAO_0001421,http://purl.obolibrary.org/obo/HAO_0001420,http://purl.obolibrary.org/obo/HAO_0001422,http://purl.obolibrary.org/obo/HAO_00014222 |
| 378 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 379 | hao | http://purl.obolibrary.org/obo/HAO_0000035 |
| 379 | pato | http://purl.obolibrary.org/obo/PATO_0000141 |
| 380 | hao | http://purl.obolibrary.org/obo/HAO_0000035 |
| 380 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 381 | hao | http://purl.obolibrary.org/obo/HAO_0000053,http://purl.obolibrary.org/obo/HAO_0000056 |
| 381 | pato | http://purl.obolibrary.org/obo/PATO_0000140 |
| 382 | hao | http://purl.obolibrary.org/obo/HAO_0001117 |
| 382 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 383 | hao | http://purl.obolibrary.org/obo/HAO_0001768 |
| 383 | pato | http://purl.obolibrary.org/obo/PATO_0000141 |
| 384 | hao | http://purl.obolibrary.org/obo/HAO_0000679 |
| 384 | pato | http://purl.obolibrary.org/obo/PATO_0000052 |
| 385 | hao | http://purl.obolibrary.org/obo/HAO_0002498 |
| 385 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 386 | hao | http://purl.obolibrary.org/obo/HAO_0001012 |
| 386 | pato | http://purl.obolibrary.org/obo/PATO_0000141 |
| 387 | hao | http://purl.obolibrary.org/obo/HAO_0001619 |
| 387 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 388 | hao | http://purl.obolibrary.org/obo/HAO_0000927 |
| 388 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |

| 389 | hao | http://purl.obolibrary.org/obo/HAO_0002499 |
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| 389 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |
| 392 | uberon | http://purl.obolibrary.org/obo/UBERON_0012245 |
| 392 | pato | http://purl.obolibrary.org/obo/PATO_0000070 |