

#### Appendix S4. Supermatrix tree of Fringillidae for three nuclear introns and five mitochondrial genes.

##### S 4.1. Assembling the supermatrix

We downloaded all Fringillidae sequences in Genbank and sorted them by taxon and locus. After counting how many taxa were available per locus, we decided to include in the supermatrix three introns and five mitochondrial genes (see locus list below), all of which were represented by at least 50 species. For each sequence, length, associated specimen/sample number and locality were retrieved from Genbank and/or the corresponding publication and combined in a preliminary table. Possible misidentification or anomalous sequences were checked using simple neighbor-joining tree.

For each species we selected one sequence per locus. Whenever possible, for a given species we selected the sequences originated from the same specimen or minimized the number of specimens, and we tried also to choose sequences obtained from the same subspecies or with similar geographic origin.

Table S 4.1. Genes, alignment length and number of sequence per gene included in the supermatrix.

| Locus   | Alignment length (bp) | Number of sequences |
|---|-----------------------|---------------------|
| Glyceraldehyde-3-phosphate dehydrogenase (GAPDH), intron 11 | 327                   | 116 (68.6 %)        |
| Myoglobin gene, intron 2                                    | 741                   | 116 (68.69 %)       |
| Ornithine decarboxylase (ODC) gene, introns 6-7             | 697                   | 112 (66. %)         |
| Cytochrome b (cytb)   | 1143                  | 129 (76.3 %)        |
| NADH dehydrogenase subunit II (ND2)                         | 1041                  | 133 (78.7 %)        |
| NADH dehydrogenase subunit III (ND3)                        | 351                   | 129 (76.3 %)        |
| Cytochrome oxidase subunit I (COI)                          | 648                   | 59 (34.9 %)         |
| ATPase subunit 6 (ATP6)                                     | 684                   | 81 (47.9 %)         |

Table S 4.2. Species and Genbank accession numbers included in the supermatrix.

| <b>Taxon</b>                    | <b>Specimen</b> | <b>GAPDH</b> | <b>Myoglobin</b> | <b>ODC</b> | <b>cytb</b> | <b>ND2</b> | <b>ND3</b> | <b>COI</b> | <b>ATP6</b> |
|---------------------------------|-----------------|--------------|------------------|------------|-------------|------------|------------|------------|-------------|
| <i>Fringilla coelebs</i>        | NRM 956301      | JN715183     | JN715273         | JN715365   |             | JN715455   | JN715548   |            |             |
| <i>Fringilla teydea</i>         | NHMO            |              |                  |            | KU705760    | KU705760   | KU705760   | KU705760   | KU705760    |
| <i>Fringilla montifringilla</i> | NRM 20046395    | JN715184     | GU816941         | GU816920   |             | GU816851   | GU816816   |            |             |
| <i>Chlorophonia cyanea</i>      | NRM 20066989    | JN715171     | JN715263         | JN715353   |             |            | JN715537   |            |             |
| <i>Chlorophonia cyanea</i>      | USNM 625305     |              |                  |            |             |            |            | JQ174424   |             |
| <i>Chlorophonia occipitalis</i> | no information  |              |                  |            |             | EF529844   |            |            |             |
| <i>Chlorophonia occipitalis</i> | no information  |              |                  |            | EF529956    |            |            |            |             |
| <i>Euphonia plumbea</i>         | USNM 632543     |              |                  |            |             |            |            | JQ174819   |             |
| <i>Euphonia affinis</i>         | 529-05          |              |                  |            |             |            |            | EU442311   |             |
| <i>Euphonia affinis</i>         | no information  |              |                  |            | EU442360    |            |            |            |             |
| <i>Euphonia luteicapilla</i>    | USNM 612448     |              |                  |            |             |            |            | JQ174817   |             |
| <i>Euphonia chlorotica</i>      | NRM 956750      | JN715175     | AY228298         | JN715357   |             | JN715448   | JN715541   |            |             |
| <i>Euphonia finschi</i>         | FMNH 389276     |              |                  |            | AF290143    |            |            |            |             |
| <i>Euphonia finschi</i>         | NRM 20066306    | JN715180     | JN715270         | JN715362   |             |            | JN715545   |            |             |
| <i>Euphonia violacea</i>        | NRM 966943      | JN715181     | JN715271         | JN715363   |             | JN715453   | JN715546   |            |             |
| <i>Euphonia laniirostris</i>    | LSU B18375      |              |                  |            | AF006232    |            |            |            |             |
| <i>Euphonia laniirostris</i>    | LSU B18411      |              |                  |            |             |            |            |            | AF447330    |
| <i>Euphonia laniirostris</i>    | NRM 20066309    | JN715176     | JN715266         | JN715358   |             | JN715449   |            |            |             |
| <i>Euphonia hirundinacea</i>    | 528-15          |              |                  |            |             |            |            | EU442301   |             |
| <i>Euphonia hirundinacea</i>    | no information  |              |                  |            | EU442333    |            |            |            |             |
| <i>Euphonia elegantissima</i>   | KU 87070        |              |                  |            |             |            |            | JQ174807   |             |

|                                      |                           |          |          |          |          |          |          |          |          |
|--------------------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <i>Euphonia cyanocephala</i>         | MACN-Or-ct 913            |          |          |          |          |          |          |          | FJ027571 |
| <i>Euphonia musica</i>               | no information            |          |          |          | AF310067 |          |          |          |          |
| <i>Euphonia musica</i>               | NRM 976696                | JN715178 | JN715268 | JN715360 |          | JN715451 | JN715543 |          |          |
| <i>Euphonia fulvicrissa</i>          | STRI PAEFU102             |          |          |          | AF383014 | AF383130 |          |          | AF382975 |
| <i>Euphonia gouldi</i>               | CU 44255                  |          |          |          |          | FJ231698 |          |          |          |
| <i>Euphonia chrysopasta</i>          | KU 89079                  |          |          |          |          |          |          |          | JQ174806 |
| <i>Euphonia minuta</i>               | NRM 20066307              | JN715177 | JN715267 | JN715359 |          | JN715450 | JN715542 |          |          |
| <i>Euphonia annae</i>                | USNM 607624               |          |          |          |          |          |          |          | JQ174801 |
| <i>Euphonia xanthogaster</i>         | NRM 20066305              | JN715182 | JN715272 | JN715364 |          | JN715454 | JN715547 |          |          |
| <i>Euphonia rufiventris</i>          | NRM 20066310              | JN715179 | JN715269 | JN715361 |          | JN715452 | JN715544 |          |          |
| <i>Euphonia pectoralis</i>           | MACN-Or-ct 2867           |          |          |          |          |          |          |          | FJ027574 |
| <i>Euphonia cayennensis</i>          | NRM 20056062              | JN715174 | JN715265 | JN715356 |          |          | JN715540 |          |          |
| <i>Mycerobas icterioides</i>         | FMNH 256357               |          |          |          | KJ456356 |          |          |          |          |
| <i>Mycerobas affinis</i>             | AMNH 5592                 |          |          |          | KJ456354 |          |          |          |          |
| <i>Mycerobas melanozanthos</i>       | FMNH 222122               |          |          |          | KJ456357 |          |          |          |          |
| <i>Mycerobas carnipes</i>            | NRM 23363                 | JN715196 | JN715284 | JN715376 |          | JN715466 | JN715558 |          |          |
| <i>Hesperiphona vespertina</i>       | NRM 23336                 | JN715186 | JN715275 | JN715367 |          | JN715457 | JN715550 |          |          |
| <i>Hesperiphona vespertina</i>       | UMMZ 235311               |          |          |          | KM078770 |          |          | KM078770 | KM078770 |
| <i>Coccothraustes coccothraustes</i> | NRM 976374                | JN715172 | AY228292 | JN715354 | AY228055 | JN715446 | JN715538 | GU571828 |          |
| <i>Eophona migratoria</i>            | no information            |          |          |          | AF342871 |          |          |          |          |
| <i>Eophona migratoria</i>            | NRM 896473                | JN715173 | JN715264 | JN715355 |          | JN715447 | JN715539 |          |          |
| <i>Eophona personata</i>             | no information            |          |          |          | AF342872 |          |          |          |          |
| <i>Melamprosops phaeosoma</i>        | BPBM 147112               | KM112521 |          | KM112827 | KM078793 | KM078793 | KM078793 | KM078793 | KM078793 |
| <i>Paroreomyza montana</i>           | NZP USFWS band 2141-67177 |          |          |          | KM078771 |          |          | KM078771 | KM078771 |

|                                  |                           |          |          |          |          |          |          |          |          |
|----------------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <i>Paroreomyza montana</i>       | RCF 1984                  | JN715197 | JN715285 | JN715377 |          | JN715467 | JN715559 |          |          |
| <i>Dysmorodrepanis munroi</i>    | NZP USFWS band 1581-75367 | KM112533 |          | KM112815 | KM078774 | KM078774 | KM078774 | KM078774 | KM078774 |
| <i>Telespiza cantans</i>         | NZP USFWS band 8061-85532 | KM112508 |          | KM112859 | KM078777 | KM078777 | KM078777 | KM078777 | KM078777 |
| <i>Telespiza ultima</i>          | Conant 92.7.26-1          | KM112509 |          | KM112811 | KM078787 | KM078787 | KM078787 |          | KM078787 |
| <i>Loxioides bailleui</i>        | MRSNT 5783                | JN715195 | JN715283 | JN715375 |          | JN715465 | JN715557 |          |          |
| <i>Loxioides bailleui</i>        | NZP USFWS band 8031-75805 |          |          |          |          |          |          | KM078805 | KM078805 |
| <i>Psittirostra psittacea</i>    | no information            |          |          |          | KU158196 | KU158196 | KU158196 | KU158196 | KU158196 |
| <i>Oreomystis bairdi</i>         | MVZ 178406                | KM112527 | KC007674 | KM112853 | KM078807 | KM078807 | KM078807 | KM078807 | KM078807 |
| <i>Magumma parva</i>             | MVZ 178407                | KM112536 |          | KM112805 | KM078799 | KM078799 | KM078799 | KM078799 | KM078799 |
| <i>Loxops caeruleirostris</i>    | MVZ 178405                | KM112505 |          | KM112834 | KM078776 | KM078776 | KM078776 | KM078776 | KM078776 |
| <i>Loxops coccineus</i>          | NZP USFWS band 2350-43262 | KM112523 |          | KM112807 | KM078785 | KM078785 | KM078785 | KM078785 | KM078785 |
| <i>Manucerthia mana</i>          | TKP 559                   | KM112532 |          | KM112820 | KM078768 | KM078768 | KM078768 | KM078768 | KM078768 |
| <i>Chlorodrepanis virens</i>     | NZP RCF-3425              |          |          |          | KM078788 |          |          | KM078788 | KM078788 |
| <i>Chlorodrepanis virens</i>     | RCF 2913                  | JN715225 | JN715313 | JN715405 |          | JN715496 | JN715588 |          |          |
| <i>Chlorodrepanis flava</i>      | NZP USFWS band 1680-10360 | KM112537 |          | KM112821 | KM078780 | KM078780 | KM078780 | KM078780 | KM078780 |
| <i>Chlorodrepanis stejnegeri</i> | NZP RCF-2666              | KM112512 |          | KM112809 | KM078801 | KM078801 | KM078801 | KM078801 | KM078801 |
| <i>Hemignathus wilsoni</i>       | NZP RCF-3422              | KM112535 |          | KM112823 | KM078802 | KM078802 | KM078802 | KM078802 | KM078802 |
| <i>Akialoa obscura</i>           | no information            |          |          |          | KU158190 | KU158190 | KU158190 | KU158190 | KU158190 |
| <i>Pseudonestor xanthophrys</i>  | NZP USFWS band 8051-40968 | KM112541 |          | KM112840 | KM078809 | KM078809 | KM078809 | KM078809 | KM078809 |
| <i>Vestiaria coccinea</i>        | NZP USFWS band 1471-19056 | KM112546 |          | KM112847 | KM078797 | KM078797 | KM078797 | KM078797 | KM078797 |
| <i>Himatione sanguinea</i>       | NZP RCF-3427              | KM112501 |          | KM112808 | KM078773 | KM078773 | KM078773 | KM078773 | KM078773 |
| <i>Palmeria dolei</i>            | BPBM 184556               | KM112499 |          | KM112801 | KM078803 | KM078803 |          |          |          |
| <i>Erythrina erythrina</i>       | NRM 976373                | JN715154 | JN715246 | JN715336 |          | JN715428 | JN715519 | GU571800 |          |
| <i>Erythrina erythrina</i>       | USNM B18937               |          |          |          | KM078766 |          |          | KM078766 | KM078766 |

|                                    |                    |          |          |          |          |          |                   |
|------------------------------------|--------------------|----------|----------|----------|----------|----------|-------------------|
| <i>Haematospiza sipahi</i>         | no information     |          |          |          | AF342875 |          |                   |
| <i>Haematospiza sipahi</i>         | NRM 23812          | JN715185 | JN715274 | JN715366 |          | JN715456 | JN715549          |
| <i>Chaunoproctus ferreorostris</i> | BMNH 1855.12.19.71 |          |          |          |          | JN715445 | JN715536          |
| <i>Carpodacus synoicus</i>         | MAR 5084           |          |          |          | KF194098 |          |                   |
| <i>Carpodacus synoicus</i>         | NHMO 26633         | JN715168 | JN715260 | JN715350 |          | JN715442 | JN715533          |
| <i>Carpodacus stoliczkae</i>       | BMNH 1967.17803    |          | KF194009 |          | KF194103 | KF194147 |                   |
| <i>Carpodacus roborowskii</i>      | NRM 23882          | JN715161 | JN715253 | JN715343 |          | JN715435 | JN715526          |
| <i>Carpodacus rubicilloides</i>    | MAR 5931           |          |          |          | KF194089 |          |                   |
| <i>Carpodacus rubicilloides</i>    | NRM 23864          | JN715167 | JN715259 | JN715349 |          | JN715441 | JN715532          |
| <i>Carpodacus rubicilla</i>        | NRM 20016594       | JN715166 | JN715258 | JN715348 |          | JN715440 | JN715531          |
| <i>Carpodacus rubicilla</i>        | ZFMK J.II.22.f.1   |          |          |          | KF194088 |          |                   |
| <i>Carpodacus sibiricus</i>        | NRM 20076294       | JN715224 | JN715312 | JN715404 |          | JN715495 | JN715587          |
| <i>Carpodacus sibiricus</i>        | UWBM 47588         |          |          |          | KM078763 |          | KM078763 KM078763 |
| <i>Carpodacus puniceus</i>         | FMNH 277071        |          |          |          | KF194173 |          |                   |
| <i>Carpodacus puniceus</i>         | NRM 23927          | JN715158 | JN715250 | JN715340 |          | JN715432 | JN715523          |
| <i>Carpodacus subhimachalus</i>    | FMNH 277061        |          |          |          | KF194180 |          |                   |
| <i>Carpodacus subhimachalus</i>    | NRM 23477          | JN715199 | JN715287 | JN715379 |          | JN715469 | JN715561          |
| <i>Carpodacus roseus</i>           | NRM 20026495       | JN715164 | JN715256 | JN715346 |          | JN715438 | JN715529          |
| <i>Carpodacus roseus</i>           | USNM B10230        |          |          |          | KM078779 |          | KM078779 KM078779 |
| <i>Carpodacus trifasciatus</i>     | MTD C63834         | KF194004 | KF194019 |          | KF194115 | KF194166 |                   |
| <i>Carpodacus thura</i>            | AMNH DOT5609       |          | KF194034 | KJ455736 | KF194181 | KF194135 |                   |
| <i>Carpodacus dubius</i>           | MAR 369            |          |          |          | KF194106 |          |                   |
| <i>Carpodacus dubius</i>           | NRM 20016581       | JN715169 | JN715261 | JN715351 |          | JN715443 | JN715534          |
| <i>Carpodacus rhodochlamys</i>     | NRM 20026491       | JN715160 | JN715252 | JN715342 | KF194174 | JN715434 | JN715525          |



|                                |                     |          |          |          |          |          |                   |
|--------------------------------|---------------------|----------|----------|----------|----------|----------|-------------------|
| <i>Pyrrhula pyrrhula</i>       | NRM 20046541        | JN715203 | JN715291 | JN715383 | JN715473 | JN715565 | GU572069          |
| <i>Pyrrhula pyrrhula</i>       | U Mainz MAR 4437    |          |          |          | HQ284595 |          |                   |
| <i>Rhodopechys sanguineus</i>  | NRM 20026504        | JN715207 | JN715295 | JN715387 | JN715477 | JN715569 |                   |
| <i>Bucanetes githagineus</i>   | MTD C64524 MAR1172  |          |          |          | HQ284701 |          |                   |
| <i>Bucanetes githagineus</i>   | NRM 20046702        | JN715204 | JN715292 | JN715384 | JN715474 | JN715566 |                   |
| <i>Eremopsaltria mongolica</i> | NRM 23495           | JN715205 | JN715293 | JN715385 | JN715475 | JN715567 |                   |
| <i>Eremopsaltria mongolica</i> | USNM B10185         |          |          |          | KM078792 |          | KM078792 KM078792 |
| <i>Agraphospiza rubescens</i>  | MART 90161          |          |          |          | KF194120 |          |                   |
| <i>Agraphospiza rubescens</i>  | NRM 23826           | JN715165 | JN715257 | JN715347 | JN715439 | JN715530 |                   |
| <i>Callacanthus burtoni</i>    | NRM 24869           | JN715135 | JN715227 | JN715317 | JN715409 | JN715500 |                   |
| <i>Pyrrhoptes epauletta</i>    | MNHN 16-2j          |          |          |          |          |          | EU880948          |
| <i>Pyrrhoptes epauletta</i>    | MTD C63109 MAR5549  |          |          |          | HQ284689 |          |                   |
| <i>Pyrrhoptes epauletta</i>    | NRM 23810           | JN715200 | JN715288 | JN715380 | JN715470 | JN715562 |                   |
| <i>Procarduelis nipalensis</i> | no information      |          |          |          | AF342866 |          |                   |
| <i>Procarduelis nipalensis</i> | NRM 23824           | JN715156 | JN715248 | JN715338 | JN715430 | JN715521 |                   |
| <i>Leucosticte nemoricola</i>  | IZAS uncat          | JN715189 | JN715278 | JN715370 | JN715460 | JN715553 |                   |
| <i>Leucosticte nemoricola</i>  | MTD C62013 MAR4246  |          |          |          | HQ284700 |          |                   |
| <i>Leucosticte brandti</i>     | NRM 24575           | JN715188 | JN715277 | JN715369 | JN715459 | JN715552 |                   |
| <i>Leucosticte brandti</i>     | UWBM 66356          |          |          |          | KM078775 |          | KM078775 KM078775 |
| <i>Leucosticte sillemi</i>     | ZMA.AVES 43449      |          |          |          | KT444635 |          |                   |
| <i>Leucosticte arctoa</i>      | NRM 24559           | JN715187 | JN715276 | JN715368 | JN715458 | JN715551 |                   |
| <i>Leucosticte arctoa</i>      | USNM 609762         |          |          |          | KM078791 |          | KM078791 KM078791 |
| <i>Leucosticte tephrocotis</i> | NRM 20016579        | JN715190 | JN715279 | JN715371 | JN715461 |          |                   |
| <i>Leucosticte tephrocotis</i> | UWBM 66944 SVD 2371 |          |          |          | KX109627 |          |                   |

|                                   |                   |          |          |          |          |          |          |          |          |
|-----------------------------------|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <i>Haemorrhous mexicanus</i>      | NRM 20056140      | JN715155 | JN715247 | JN715337 |          | JN715429 | JN715520 |          |          |
| <i>Haemorrhous mexicanus</i>      | NZP RCF-2645      |          |          |          | KM078782 |          |          | KM078782 | KM078782 |
| <i>Haemorrhous cassinii</i>       | USNM B20075       | KM112518 |          | KM112813 | KM078786 | KM078786 | KM078786 | KM078786 | KM078786 |
| <i>Haemorrhous purpureus</i>      | NRM 557743        | JN715159 | JN715251 | JN715341 |          | JN715433 | JN715524 |          |          |
| <i>Haemorrhous purpureus</i>      | UMMZ 227048 T-126 |          |          |          | KM078772 |          |          |          | KM078772 |
| <i>Rhodospiza obsoleta</i>        | NRM 20046707      | JN715206 | JN715294 | JN715386 |          | JN715476 | JN715568 |          |          |
| <i>Rhynchostruthus socotranus</i> | NRM 23483         | JN715208 | JN715296 | JN715388 |          | JN715478 | JN715570 |          |          |
| <i>Chloris chloris</i>            | MNHN C34          |          |          |          |          |          |          |          | EU880931 |
| <i>Chloris chloris</i>            | NRM 986328        | JN715141 | JN715233 | JN715323 |          | JN715415 | JN715506 | GU571791 |          |
| <i>Chloris chloris</i>            | SMTD C 62175      |          |          |          | HQ284692 |          |          |          |          |
| <i>Chloris sinica</i>             | NRM 20026538      | JN715150 | JN715242 | JN715332 |          | JN715424 | JN715515 |          |          |
| <i>Chloris sinica</i>             | USNM B19440       |          |          |          | KM078783 |          |          | KM078783 | KM078783 |
| <i>Chloris spinoides</i>          | NRM 20026503      | JN715151 | JN715243 | JN715333 | KJ456211 | JN715425 | JN715516 |          |          |
| <i>Chloris spinoides</i>          | ZMUC 131646       |          |          |          |          |          |          |          | EU880974 |
| <i>Chloris monguilloti</i>        | NRM 546196        | JN715147 | JN715239 | JN715329 |          | JN715421 | JN715512 |          |          |
| <i>Chloris ambigua</i>            | no information    |          |          |          | U78322   |          |          |          |          |
| <i>Chloris ambigua</i>            | NRM 20026539      | JN715136 | JN715228 | JN715318 |          | JN715410 | JN715501 |          |          |
| <i>Chloris ambigua</i>            | ZMUC 118651       |          |          |          |          |          |          |          | EU880992 |
| <i>Linurgus olivaceus</i>         | MNHN 40-23        |          |          |          |          |          |          |          | EU880938 |
| <i>Linurgus olivaceus</i>         | NRM 20086232      | JN715191 | JN715280 | JN715372 |          | JN715462 | JN715554 |          |          |
| <i>Crithagra citrinelloides</i>   | no information    |          |          |          | AY790888 |          |          |          |          |
| <i>Crithagra citrinelloides</i>   | NRM 20026501      | JN715212 | JN715300 | JN715392 |          | JN715482 | JN715574 |          |          |
| <i>Crithagra citrinelloides</i>   | ZMUC 134740       |          |          |          |          |          |          |          | EU880968 |
| <i>Crithagra hyposticta</i>       | ZMUC 131127       |          | EU878731 |          |          |          | EU881039 |          | EU880971 |





|                                |                |          |          |          |          |          |          |          |
|--------------------------------|----------------|----------|----------|----------|----------|----------|----------|----------|
| <i>Crithagra burtoni</i>       | no information |          |          |          | AY790896 |          |          |          |
| <i>Crithagra burtoni</i>       | NRM 20086267   | JN715209 | JN715297 | JN715389 |          | JN715479 | JN715571 |          |
| <i>Crithagra burtoni</i>       | ZMUC 123647    |          |          |          |          |          |          | EU880997 |
| <i>Crithagra melanothroa</i>   | ZMUC 118856    |          | EU878737 |          |          | EU881046 |          | EU880978 |
| <i>Crithagra rufobrunnea</i>   | NRM 857618     | JN715218 | JN715306 | JN715398 |          | JN715489 | JN715581 |          |
| <i>Crithagra totta</i>         | no information |          |          |          | AY790892 |          |          |          |
| <i>Linaria flavirostris</i>    | JM136          |          |          |          | KJ456172 |          |          |          |
| <i>Linaria flavirostris</i>    | NRM 20066634   | JN715144 | JN715236 | JN715326 |          | JN715418 | JN715509 | GU571794 |
| <i>Linaria cannabina</i>       | MNHN 25-82     |          |          |          |          |          |          | EU880939 |
| <i>Linaria cannabina</i>       | NRM 966403     | JN715139 | JN715231 | JN715321 |          | JN715413 | JN715504 | GU571787 |
| <i>Linaria cannabina</i>       | SMTD C 61033   |          |          |          | HQ284691 |          |          |          |
| <i>Acanthis flammea</i>        | no information |          |          |          | L76386   |          |          |          |
| <i>Acanthis flammea</i>        | NRM 20016449   | JN715143 | JN715235 | JN715325 |          | JN715417 | JN715508 | GU571793 |
| <i>Acanthis hornemanni</i>     | AJN 000043     | JN715145 | JN715237 | JN715327 |          | JN715419 | JN715510 | GU571795 |
| <i>Acanthis hornemanni</i>     | no information |          |          |          | U83201   |          |          |          |
| <i>Acanthis hornemanni</i>     | ZMUC 119818    |          |          |          |          |          |          | EU880989 |
| <i>Loxia pytyopsittacus</i>    | NRM 20046001   | JN715194 | JN715282 | JN715374 |          | JN715464 | JN715556 | GU571962 |
| <i>Loxia pytyopsittacus</i>    | ZMUC 119824    |          |          |          |          |          |          | EU880986 |
| <i>Loxia scotica</i>           | no information |          |          |          | AF171656 |          |          |          |
| <i>Loxia curvirostra</i>       | NRM 976546     | JN715192 | AY228303 | GU816921 | AY228065 | GU816852 | GU816817 | GU571958 |
| <i>Loxia leucoptera</i>        | no information |          |          |          | AF342878 |          |          |          |
| <i>Loxia leucoptera</i>        | NRM 20026565   | JN715193 | JN715281 | JN715373 |          | JN715463 | JN715555 | GU571960 |
| <i>Loxia leucoptera</i>        | ZMUC 116705    |          |          |          |          |          |          | EU880962 |
| <i>Chrysocorythus estherae</i> | RMNH 44712     |          |          |          |          | JN715483 | JN715575 |          |

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|-----------------------------|---------------------------|----------|----------|----------|----------|----------|----------|----------|
| <i>Carduelis carduelis</i>  | NRM 996076                | JN715140 | JN715232 | JN715322 | JN715414 | JN715505 | GU571789 |          |
| <i>Carduelis carduelis</i>  | NZP USFWS band 1760-76299 |          |          |          |          |          | KM078790 | KM078790 |
| <i>Carduelis citrinella</i> | MNHN C38                  |          |          |          |          |          |          | EU880933 |
| <i>Carduelis citrinella</i> | no information            |          |          |          | L77872   |          |          |          |
| <i>Carduelis citrinella</i> | NRM 553307                | JN715211 | JN715299 | JN715391 | JN715481 | JN715573 |          |          |
| <i>Serinus serinus</i>      | no information            |          |          |          | L76263   |          |          |          |
| <i>Serinus serinus</i>      | NRM 20046491              | JN715219 | JN715307 | JN715399 | JN715490 | JN715582 | GU572089 |          |
| <i>Serinus serinus</i>      | ZMUC 116715               |          |          |          |          |          |          | EU880980 |
| <i>Serinus canaria</i>      | NRM 20026502              | JN715213 | JN715301 | JN715393 | JN715484 | JN715576 |          |          |
| <i>Serinus canaria</i>      | NZP 105                   |          |          |          | KM078794 |          | KM078794 | KM078794 |
| <i>Serinus syriacus</i>     | NRM 23600                 | JN715222 | JN715310 | JN715402 | JN715493 | JN715585 |          |          |
| <i>Serinus pusillus</i>     | JM128                     |          |          |          | KJ456465 |          |          |          |
| <i>Serinus pusillus</i>     | NRM 20046715              | JN715217 | JN715305 | JN715397 | JN715488 | JN715580 |          |          |
| <i>Serinus pusillus</i>     | ZMUC 135626               |          |          |          |          |          |          | EU880983 |
| <i>Serinus alario</i>       | no information            |          |          |          | AY790899 |          |          |          |
| <i>Serinus canicollis</i>   | no information            |          |          |          | AY790890 |          |          |          |
| <i>Serinus canicollis</i>   | NRM 20076189              | JN715210 | JN715298 | JN715390 | JN715480 | JN715572 |          |          |
| <i>Serinus canicollis</i>   | ZMUC 128624               |          |          |          |          |          |          | EU880958 |
| <i>Serinus flavivertex</i>  | no information            |          |          |          | AY790897 |          |          |          |
| <i>Spinus thibetanus</i>    | BMNH 1948.34.64           | JN715223 | JN715311 | JN715403 | JN715494 | JN715586 |          |          |
| <i>Spinus thibetanus</i>    | no information            |          |          |          | L76279   |          |          |          |
| <i>Spinus spinus</i>        | MNHN 2000.1651            |          |          |          |          |          |          | EU880941 |
| <i>Spinus spinus</i>        | no information            |          |          |          | L76391   |          |          |          |
| <i>Spinus spinus</i>        | NRM 986184                | JN715152 | JN715244 | JN715334 | JN715426 | JN715517 | GU571799 |          |

|                             |                           |          |          |          |          |          |                   |
|-----------------------------|---------------------------|----------|----------|----------|----------|----------|-------------------|
| <i>Spinus pinus</i>         | NRM 20016375              | JN715148 | JN715240 | JN715330 | JN715422 | JN715513 |                   |
| <i>Spinus pinus</i>         | UMMZ 227858               |          |          |          | KM078796 |          | KM078796 KM078796 |
| <i>Spinus tristis</i>       | MSB 29161                 |          |          |          | KT221304 |          |                   |
| <i>Spinus tristis</i>       | NRM 20016378              | JN715153 | JN715245 | JN715335 | JN715427 | JN715518 |                   |
| <i>Spinus psaltria</i>      | NRM 20016376              | JN715149 | JN715241 | JN715331 | JN715423 | JN715514 |                   |
| <i>Spinus psaltria</i>      | NZP USFWS band 2120-99480 |          |          |          | KM078806 |          | KM078806 KM078806 |
| <i>Spinus lawrencei</i>     | MVZ 176985                |          | KT221368 |          | KT221302 | KT221172 |                   |
| <i>Spinus atriceps</i>      | 01N6050                   |          |          |          |          |          | KT358782          |
| <i>Spinus atriceps</i>      | AMNH DOT7151              |          | KT221375 |          | KT221309 | KT221179 | KT221243          |
| <i>Spinus spinescens</i>    | ANSP 18807                |          |          |          | KT221360 | KT221230 | KT221294          |
| <i>Spinus spinescens</i>    | ZMUC 120509               |          |          |          |          |          | EU880985          |
| <i>Spinus yarrellii</i>     | no information            |          |          |          | U83200   |          |                   |
| <i>Spinus cucullatus</i>    | NRM 20026508              | JN715142 | JN715234 | JN715324 | JN715416 | JN715507 |                   |
| <i>Spinus cucullatus</i>    | USNM B12867               |          |          |          | KT221318 |          |                   |
| <i>Spinus cucullatus</i>    | ZMUC 135619               |          |          |          |          |          | EU880982          |
| <i>Spinus crassirostris</i> | MSB 34207                 |          | KT221383 |          | KT221317 | KT221187 | KT221251          |
| <i>Spinus crassirostris</i> | ZMUC 129671               |          |          |          |          |          | EU880959          |
| <i>Spinus magellanicus</i>  | FMNH 334723               |          |          |          | KT221349 |          |                   |
| <i>Spinus magellanicus</i>  | NRM 986696                | JN715146 | JN715238 | JN715328 | JN715420 | JN715511 |                   |
| <i>Spinus magellanicus</i>  | ZMUC 120822               |          |          |          |          |          | EU880988          |
| <i>Spinus dominicensis</i>  | AMNH DOT6930              |          | KT221387 |          | KT221322 | KT221192 | KT221256          |
| <i>Spinus siemiradzkii</i>  | ANSP 19701                |          |          |          | KT221358 |          |                   |
| <i>Spinus siemiradzkii</i>  | ZMUC 116681               |          | EU878725 |          |          | EU881033 | EU880965          |
| <i>Spinus olivaceus</i>     | ANSP 19746                |          |          |          | KT221354 | KT221224 | KT221288          |



