**Table S2. The identities of entire mitogenomes from other members of [Acrididae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1102980), with the *Ceracris fasciata* mitogenome.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Superfamily** | **Family** | **Subfamily** | **Species** | **Identity** | **Gen Bank No.** |
| **[Acridoidea](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1102979)** | **[Acrididae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1102980)** | **[Oedipodinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1103071)** | *[Ceracris versicolor](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_604159144" \o "Go to alignment for Ceracris versicolor mitochondrion, complete genome)* | 89% | [KJ188251.1](https://www.ncbi.nlm.nih.gov/nucleotide/604159144?report=genbank&log$=nucltop&blast_rank=1&RID=C7HGPNA9016" \o "Show report for KJ188251.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |
| **[Oedipodinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1103071)** | *[Ceracris kiangsu](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_284098429" \o "Go to alignment for Ceracris kiangsu isolate H6012 mitochondrion, complete genome)* | 89% | [GU270284.1](https://www.ncbi.nlm.nih.gov/nucleotide/284098429?report=genbank&log$=nucltop&blast_rank=2&RID=C7HGPNA9016" \o "Show report for GU270284.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |
| **[Acridinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1111339)** | *[Phlaeoba infumata](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_1072896749" \o "Go to alignment for Phlaeoba infumata mitochondrion, complete genome)* | 87% | [KU866166.1](https://www.ncbi.nlm.nih.gov/nucleotide/1072896749?report=genbank&log$=nucltop&blast_rank=3&RID=C7HGPNA9016" \o "Show report for KU866166.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |
| **[Acridinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1111339)** | *[Phlaeoba albonema](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_164528361" \o "Go to alignment for Phlaeoba albonema mitochondrion, complete genome)* | 87% | [EU370925.1](https://www.ncbi.nlm.nih.gov/nucleotide/164528361?report=genbank&log$=nucltop&blast_rank=4&RID=C7HGPNA9016" \o "Show report for EU370925.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |
| **[Acridinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1111339)** | *[Phlaeoba tenebrosa](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_583829740" \o "Go to alignment for Phlaeoba tenebrosa mitochondrion, complete genome)* | 87% | [KF937392.1](https://www.ncbi.nlm.nih.gov/nucleotide/583829740?report=genbank&log$=nucltop&blast_rank=5&RID=C7HGPNA9016" \o "Show report for KF937392.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |
| **[Gomphocerinae](http://orthoptera.speciesfile.org/Common/basic/Taxa.aspx?TaxonNameID=1105091)** | *[Gonista bicolor](https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/alndb_asn.cgi&ALIGNDB_MASTER_ALIAS=SD_ALIGNDB_MASTER&ALIGNDB_MAX_ROWS=100&ALIGNDB_ORDER_CLAUSE=seq_evalue asc,aln_id asc&ALIGNDB_WHERE_CLAUSE=seq_evalue is not null&ALIGNMENTS=100&ALIGNMENT_VIEW=Pairwise&DATABASE_SORT=0&DESCRIPTIONS=100&DYNAMIC_FORMAT=on&FIRST_QUERY_NUM=0&FORMAT_OBJECT=Alignment&FORMAT_PAGE_TARGET=&FORMAT_TYPE=HTML&GET_SEQUENCE=yes&I_THRESH=&LINE_LENGTH=60&MASK_CHAR=2&MASK_COLOR=1&NUM_OVERVIEW=100&PAGE=MegaBlast&QUERY_INDEX=0&QUERY_NUMBER=0&RESULTS_PAGE_TARGET=&RID=C7HGPNA9016&SHOW_LINKOUT=yes&SHOW_OVERVIEW=yes&STEP_NUMBER=&USE_ALIGNDB=true&DISPLAY_SORT=3&HSP_SORT=3" \l "alnHdr_930616981" \o "Go to alignment for Gonista bicolor mitochondrion, complete genome)* | 87% | [KR347439.1](https://www.ncbi.nlm.nih.gov/nucleotide/930616981?report=genbank&log$=nucltop&blast_rank=6&RID=C7HGPNA9016" \o "Show report for KR347439.1" \t "https://blast.ncbi.nlm.nih.gov/Blast.cgi?CMD=Get&ALIGNDB_BATCH_ID=267817431&ALIGNDB_CGI_HOST=blast.be-md.ncbi.nlm.nih.gov&ALIGNDB_CGI_PATH=/ALIGNDB/lnkC7HGPNA9016) |