```
% this is ../../crops/18r/planning/current pedigrees/primary dominants/les17- w23
% generated Friday, June 01, 2018 at 21:28:50 UTC (=1527888530.887231) by compute_pedigrees/1.
% Horizontal pedigrees, generations at same indentation. S: Mo20W; W: W23; M: M14.
% !!! => cross was not by Toni; references to image locations on right.
% W23/Les17-
 06R0030:0000000 x 06R0030:0000000
      06R0030:0003003 x 06R0030:0003002
      06R0030:0003008 x 06R0030:0003007
      06R0030:0003009 x 06R0030:0003005
      06R0030:0003011 x 06R0030:0003012
      06R200:S0I10001 x 06R0030:0003007
           09R201:S0043609 x 09R1259:0031902
                10R205:S0003105 x 10R1321:0032504
                                                             10R1321:0032504: [10r/gimmel/15.8-[510]]
                10R205:S0003106 x 10R1321:0032509
                                                             10R1321:0032509: [10r/gimmel/15.8-[511]]
                                                                 _11R3206:0025006: [11r/aleph/19.8-[1122]]
                     11R205:S0051615 x 11R3206:0025006
                          11N205:S0035401 x 11N3459:0018610
                               12R205:S0003703 x 12R3641:0029901
                                                                            12R3641:0029901: [12r/bet/8.8-[198]]
                                    12N504:B0042803 x 12N4023:0029501
                                    13R4023:0009204 x 13R4023:0009203
                                                                                  13R4023:0009203: [13r/bet/11.7-[969,970,9
71]]
                                    13R4023:0009206 x 13R4023:0009203
                                                                                  13R4023:0009203: [13r/bet/11.7-[969,970,9
                                    13R4023:0009208 x 13R4023:0009203
                                                                                 13R4023:0009203: [13r/bet/11.7-[969,970,9
7111
                                    14R4023:0014001 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014003 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014004 x 14R4023:0014009
                                                                                  14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014007 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014010 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014011 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014012 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014014 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014016 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
                                    14R4023:0014017 x 14R4023:0014009
                                                                                 14R4023:0014009: [14r/bet/20.8-[2214],14r
/bet/22.8-[2286]]
```

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les17- w23
                 Fri Jun 01 16:28:50 2018
                               12R205:S0003705 x 12R3641:0029904
                               12R205:S0008516 x 12R3641:0029904
                               12R205:S0011216 x 12R3641:0029902
                                                                            12R3641:0029902: [12r/bet/3.8-[48]]
                               12R3641:0029901 x 12R3641:0029901
                                                                            12R3641:0029901: [12r/bet/8.8-[198]]
2R3641:0029901: [12r/bet/8.8-[198]]
                               12R503:B0012503 x 12R3641:0029902
                                                                            12R3641:0029902: [12r/bet/3.8-[48]]
                               12R503:B0012505 x 12R3641:0029904
                               12R503:B0012510 x 12R3641:0029901
                                                                            12R3641:0029901: [12r/bet/8.8-[198]]
                          11N205:S0035403 x 11N3459:0018608
                          11N205:S0035411 x 11N3459:0018605
           09R201:S0043612 x 09R1259:0031910
           09R201:S0043613 x 09R1259:0031903
      06R300:W00I6405 x 06R0030:0003007
           07R201:S0032701 x 07R1327:0065303
                                                        07R1327:0065303: [07r/gimmel/12.8-[364,365]]
           07R301:W0032604 x 07R1327:0065303
                                                        07R1327:0065303: [07r/gimmel/12.8-[364,365]]
           07R401:M0033106 x 07R1327:0065303
                                                        07R1327:0065303: [07r/gimmel/12.8-[364,365]]
      06R300:W00I8704 x 06R0030:0003007
           06N301:W0034407 x 06N1326:0017502
                07R301:W0032311 x 07R2889:0064108
                                                             07R2889:0064108: [07r/gimmel/12.8-[339,340,341]]
                     09R301:W0040413 x 09R1818:0026314
                                                                  09R1818:0026314: [09r/bet/12.9-[438]]
                          10R305:W0004511 x 10R2257:0032605
                                                                       10R2257:0032605: [10r/gimmel/15.8-[513]]
                                                                            11R3274:0054304: [11r/aleph/18.8-[1026]]
                               11R305:W0051507 x 11R3274:0054304
                               11R305:W0052104 x 11R3274:0054302
                                                                            11R3274:0054302: [11r/aleph/18.8-[1023]]
                                    11N305:W0031401 x 11N3460:0018709
                                    11N305:W0031402 x 11N3460:0018706
                                    11N305:W0037102 x 11N3460:0018704
                                         12R305:W0010701 x 12R3642:0030108
                                         12R305:W0010713 x 12R3642:0030110
                                                                                       12R3642:0030110: [12r/aleph/9.8-[212
4]]
                                         12R305:W0011610 x 12R3642:0030109
                                                                                       12R3642:0030109: [12r/aleph/9.8-[210
                                    12N3460:0029708 x 12N3460:0029706
                                         13R4109:0011412 x 13R4112:0012209
                                         13R4109:0011413 x 13R4112:0012213
                                         13R4110:0011608 x 13R4112:0012303
                                                                                       13R4110:0011608: [13r/bet/17.7-[1247
],13r/bet/22.7-[1519],13r/bet/27.7-[1669]] 13R4112:0012303: [13r/bet/6.8-[1847]]
                                         13R4110:0011618 x 13R4112:0012305
                                                                                       13R4110:0011618: [13r/bet/17.7-[1250]
],13r/bet/22.7-[1522],13r/bet/27.7-[1672]]
                                         13R4110:0011810 x 13R4112:0012401
                                                                                       13R4110:0011810: [13r/bet/17.7-[1256
],13r/bet/22.7-[1528],13r/bet/27.7-[1678]]
                                         13R4111:0011916 x 13R4112:0012309
  revorted
                                         13R4111:0012009 x 13R4112:0012407
                                         13R4111:0012010 x 13R4112:0012205
                                         13R4111:0012108 x 13R4112:0012217
                                         13R4111:0012111 x 13R4112:0012219
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13R4112:0012205 x 13R4111:0012010 13R4112:0012208 x 13R4111:0012006

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les17- w23
                 Fri Jun 01 16:28:50 2018
                                         13R4112:0012209 x 13R4109:0011412
                                         13R4112:0012213 x 13R4109:0011413
                                         13R4112:0012217 x 13R4111:0012108
                                         13R4112:0012219 x 13R4111:0012111
                                         13R4112:0012303 x 13R4110:0011608
                                                                                      13R4112:0012303: [13r/bet/6.8-[1847]
        13R4110:0011608: [13r/bet/17.7-[1247],13r/bet/22.7-[1519],13r/bet/27.7-[1669]]
                                         13R4112:0012305 x 13R4110:0011618
                                                                                      13R4110:0011618: [13r/bet/17.7-[1250]
],13r/bet/22.7-[1522],13r/bet/27.7-[1672]]
                                         13R4112:0012401 x 13R4111:0012112
                                         13R4112:0012404 x 13R4111:0012003
                                         13R4112:0012407 x 13R4111:0012009
                                    12N504:B0040105 x 12N3460:0029703
                                    12N504:B0040107 x 12N3460:0029704
                                    12N504:B0040108 \times 12N3460:0029706
                                    12R3460:0030008 x 12R3460:0030008
                                                                                 12R3460:0030008: [12r/bet/3.8-[51],12r/be
t/8.8-[199]] 12R3460:0030008: [12r/bet/3.8-[51],12r/bet/8.8-[199]]
                                    12R3460:0030011 x 12R3460:0030011
                                                                                 12R3460:0030011: [12r/bet/3.8-[50],12r/be
t/8.8-[200]] 12R3460:0030011: [12r/bet/3.8-[50],12r/bet/8.8-[200]]
                                    13R3460:0009303 x 13R3460:0009305
                                                                                 13R3460:0009305: [13r/bet/6.8-[1812]]
                                    13R3460:0009307 x 13R3460:0009311
                                    13R3460:0009309 x 13R3460:0009305
                                                                                 13R3460:0009309: [13r/bet/6.8-[1815]]
   13R3460:0009305: [13r/bet/6.8-[1812]]
                                    13R3460:0009313 x 13R3460:0009305
                                                                                 13R3460:0009305: [13r/bet/6.8-[1812]]
                                    14R3460:0014110 x 14R3460:0014103
                                                                                 14R3460:0014103: [14r/bet/20.8-[2216],14r
/bet/22.8-[2267]]
                                    14R3460:0014114 x 14R3460:0014103
                                                                                 14R3460:0014103: [14r/bet/20.8-[2216],14r
/bet/22.8-[2267]]
                                    14R3460:0014115 x 14R3460:0014103
                                                                                 14R3460:0014103: [14r/bet/20.8-[2216],14r
/bet/22.8-[2267]]
                               11R305:W0052108 x 11R3274:0054304
                                                                            11R3274:0054304: [11r/aleph/18.8-[1026]]
                               11R3274:0054302 x 11R3274:0054302
                                                                            11R3274:0054302: [11r/aleph/18.8-[1023]]
                                                                                                                          1
1R3274:0054302: [11r/aleph/18.8-[1023]]
                               11R3274:0054303 x 11R3274:0054303
                               11R3274:0054304 x 11R3274:0054304
                                                                            11R3274:0054304: [11r/aleph/18.8-[1026]]
                                                                                                                          1
1R3274:0054304: [11r/aleph/18.8-[1026]]
                               11R3274:0054305 x 11R3274:0054305
                          10R305:W0004806 x 10R2257:0032602
                                                                       10R2257:0032602: [10r/gimmel/15.8-[512]]
                          10R305:W0004808 x 10R2257:0032606
                                                                       10R2257:0032606: [10r/gimmel/15.8-[514]]
                     09R301:W0041902 x 09R1818:0026305
                                                                  09R1818:0026305: [09r/bet/12.9-[433]]
                     09R301:W0041905 x 09R1818:0026306
                07R301:W0034406 x 07R2889:0064109
           06N301:W0034501 x 06N1326:0017503
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07R2886:0064401: [07r/gimmel/12.8-[342,343,344]]

07R2886:0064401: [07r/gimmel/12.8-[342,343,344]] 07R2886:0064402: [07r/gimmel/12.8-[346,348,349]]

06N301:W0034505 x 06N1326:0017505 06N301:W0034601 x 06N1326:0017508

07R201:S0034610 x 07R2886:0064401

07R301:W0029617 x 07R2886:0064401

07R301:W0034409 x 07R2886:0064402

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les17- w23
                 Fri Jun 01 16:28:50 2018
           07R201:S0019302 x 07R1326:0113704
           07R201:S0120001 x 07R1326:0113704
                                                  111
           07R301:W0085616 x 07R1326:0113704
      06R300:W00I8709 x 06R0030:0003012
           06N301:W0007506 x 06N1325:0017401
           06N301:W0034406 x 06N1325:0017401
                07R201:S0034614 x 07R2890:0065408
                07R301:W0034110 x 07R2890:0065409
                07R301:W0034713 x 07R2890:0065408
                07R401:M0034507 x 07R2890:0065408
      06R400:M00I8503 x 06R0030:0003007
           06N201:S0009211 x 06N1719:0022302
           06N201:S0013903 x 06N1719:0022304
           06N301:W0009910 \times 06N1719:0022303
                07R201:S0034001 x 07R2882:0064711
                07R301:W0034101 x 07R2882:0064711
                07R401:M0033901 x 07R2882:0064711
           06N301:W0011409 x 06N1719:0022304
           06N301:W0030801 x 06N1719:0022306
           06N301:W0036509 x 06N1719:0022302
           06N401:M0009706 x 06N1719:0022304
                07R401:M0033402 x 07R2881:0065010
                07R401:M0033405 x 07R2881:0065005
           06N401:M0011905 \times 06N1719:0022302
                07R401:M0034207 x 07R2885:0064606
                                                              07R2885:0064606: [07r/qimmel/12.8-[356,357,358]]
                     10R405:M0006312 \times 10R2140:0032706
                                                                   10R2140:0032706: [10r/gimmel/15.8-[515]]
                          12R405:M0009903 x 12R3242:0030201
                                                                        12R3242:0030201: [12r/aleph/9.8-[2074]]
                          12R405:M0009910 x 12R3242:0030202
                                                                        12R3242:0030202: [12r/aleph/9.8-[2117]]
                               16R405:M0000812 x 16R4027:0012203
                                                                             16R4027:0012203: [16r/gimmel/28.7-[204]]
                               16R405:M0003312 x 16R4027:0012203
                                                                             16R4027:0012203: [16r/gimmel/28.7-[204]]
                                    17R4555:0009801 x 17R4555:0009801
                                    17R4555:0009808 x 17R4555:0009810
                                    17R4555:0009809 x 17R4555:0009810
                                    17R4555:0009901 x 17R4555:0009801
                                    17R4555:0009902 x 17R4555:0009801
                                    17R4555:0009911 x 17R4555:0009801
                                    17R4555:0009913 x 17R4555:0009801
                                    17R505:B0002916 x 17R4555:0009810
                                    17R505:B0002917 x 17R4555:0009810
                                    17R505:B0003013 x 17R4555:0009810
                                    17R505:B0003014 x 17R4555:0009810
                               16R405:M0003315 x 16R4027:0012203
                                                                             16R4027:0012203: [16r/gimmel/28.7-[204]]
                          12R405:M0010507 x 12R3242:0030201
                                                                        12R3242:0030201: [12r/aleph/9.8-[2074]]
                          12R405:M0010517 x 12R3242:0030202
                                                                        12R3242:0030202: [12r/aleph/9.8-[2117]]
                          12R405:M0010820 x 12R3242:0030209
                               16R405:M0000811 x 16R4297:0012305
                                                                             16R4297:0012305: [16r/qimmel/28.7-[220]]
                               16R405:M0003309 x 16R4297:0012305
                                                                             16R4297:0012305: [16r/gimmel/28.7-[220]]
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12R405:M0011105 x 12R3242:0030209

15R405:M0001105 x 15R4170:0014305

15R405:M0001311 x 15R4170:0014311

12R405:M0011107 x 12R3242:0030202 12R405:M0011110 x 12R3242:0030203

• 16R405:M0000808 x 16R4298:0012403

17R4554:0010003 x 17R4554:0010009

17R4554:0010004 x 17R4554:0010009

17R4554:0010005 x 17R4554:0010009

17R4554:0010007 x 17R4554:0010009

17R505:B0002913 x 17R4554:0010009

17R505:B0002914 x 17R4554:0010009

16R405:M0003213 x 16R4298:0012406

06N401:M0012002 x 06N1719:0022303 06N401:M0026406 x 06N1719:0022306

07R301:W0033813 x 07R2878:0065211

07R401:M0030307 x 07R2878:0065211

07R401:M0033109 x 07R2878:0065211

06R400:M00I8504 x 06R0030:0003012

15R4170:0014305: [15r/bet/8.8-[2608,2610]]

15R4170:0014311: [15r/bet/8.8-[2609]]

12R3242:0030202: [12r/aleph/9.8-[2117]]

16R4298:0012403: [16r/gimmel/28.7-[203]]

16R4298:0012406: [16r/qimmel/28.7-[236]]