

Publications (Klaus Mummenhoff)

(2017-2018)

Mohammadin, S., Peterse, K. van de Kerke, S.J. Chatrou, L.W. Dönmez, A.A. Mummenhoff, K., Chris Pires, J.C., Edger, P.P., Al-Shehbaz, I.A. Schranz, M.E. Anatolian origins and diversification of *Aethionema*, the sister lineage of the core Brassicaceae. *American Journal of Botany* in press

Schrader J, Unsicker SB, Bhattacharya S, Mummenhoff K. (2017) Growth form rather than phylogenetic relationship predicts broad volatile emission patterns in the Brassicaceae. *Plant Systematics and Evolution* 303: 653–662. DOI10.1007/s00606-017-1397-8

Franzke A, Sharif Samani B-R, Neuffer B, Mummenhoff K, Hurka, H. (2017) Molecular evidence in *Diplotaxis* (Brassicaceae) suggests a Quaternary origin of the Cape Verdean flora. *Plant Systematics and Evolution* 303: 467-479 DOI10.1007/s00606-016-1384-5

Özüdoğru B, Al-Shehbaz IA, Mummenhoff K (2017) Tribal assignment of *Heldreichia* Boiss. (Brassicaceae): Evidence from nuclear ITS and plastidic ndhF markers. *Plant Systematics and Evolution* 303: 329-335.

(2015-2016)

Lenser T., et al, *Theißen G., *Mummenhoff K, *Leubner-Metzger G. (2016) *Aethionema arabicum* as a model system for studying developmental control and plasticity of fruit and seed dimorphism. *Plant Physiology*, 172: 1691–1707, * contributed equally to this work

Franzke, A., Koch, M.A., Mummenhoff, K. (2016) Turnip time travels – Age estimates in Brassicaceae. *Trends in Plant Sciences* 21: 554-561

Özüdoğru, B., Akaydın, G., Erik, S., Mummenhoff, K. (2016) Seed morphology of *Ricotia* L. (Brassicaceae) and its phylogenetic and systematic implication. *Flora* 222: 60–67, DOI: 10.1016/j.flora.2016.03.013

Salariato DL, Zuloaga FO, Franzke A, Mummenhoff K, Al-Shehbaz IA. (2016) Diversification patterns of the CES clade (Tribes Cremolobeae, Eudemeae, Schizopetaleae: Brassicaceae) along Andean South America. *Botanical Journal of the Linnean Society* 181: 543–566

Mandáková, T., Winter, P., Al-Shehbaz, I.A., Mucina, L., Mummenhoff, K., Lysak, M. (2015) Chromosome counts in the tribe Heliophileae (Brassicaceae). *Taxon* 64: 1073

Özüdoğru B, Akaydın G, Erik S, Al-Shehbaz IA, Mummenhoff K. (2015) Phylogenetic perspectives, diversification, and biogeographic implications of the eastern Mediterranean endemic genus *Ricotia* L. (Brassicaceae). *Taxon*, 64: 727–740.

Nordmann, J., Buczka, S., Voss, B., Haase, M., Mummenhoff, K. (2015) In vivo analysis of the size- and time-dependent uptake of NaYF₄:Yb,Er upconversion nanocrystals by pumpkin seedlings. *J. Mater. Chem. B* 3: 144-150

Ziffer-Berger, J., Hanin, N., Vogel, T., Mummenhoff, K., Barazani, O. (2015) Molecular phylogeny indicates polyphyly in *Raphanus* L. (Brassicaceae). *Edinburgh Journal of Botany* 72: 1 – 11; doi:10.1017/S0960428614000286

(2013-2014)

Zozomová-Lihová J, Mandáková T, Kovaříková A, Mülhausen A, Mummenhoff K, Lysak M A, Kovařík, A (2014) When fathers are instant losers: homogenization of rDNA loci in recently formed *Cardamine* × *schulzii* trigenomic allopolyploid. *New Phytologist* 203: 1096-1108 doi:10.1111/nph.12873

Graeber K., Linkies A., Steinbrecher T., Mummenhoff K., Tarkowská D., Turečková V., Ignatz M., Sperber K., Voegelé A., de Jong H., Urbanová T., Strnad M., Leubner-Metzger G. (2014) DELAY OF GERMINATION 1 mediates a conserved coat dormancy mechanism for the temperature- and gibberellin-dependent control of seed germination. **Proc. Natl. Acad. Sci. USA.** 111: E3571–E3580.

Firat, M., Özüdogru B., Tarikaya-Hacioglu B., Savas Bülbül A., Al-Shehbaz I.A., Mummenhoff, K. (2014) Phylogenetic position and taxonomic assignment of *Thlaspi aghricum* P.H.Davis & K.Tan (Brassicaceae). **Phytotaxa** 178: 287–297.

Edger P.P, Tang M, Bird K.A., Mayfield D.R., Conant G., Mummenhoff K, Koch M.A., and Pires J.C. (2014) Secondary structure analyses of the nuclear rRNA internal transcribed spacers and assessment of its phylogenetic utility across the Brassicaceae (Mustards). **PLoS one** 9 (7): e101341

Al-Shehbaz, I.A., German, D.A., Mummenhoff, K., Moazzeni, H. (2014). Systematics, tribal placement, and synopses of the *Malcolmia* s.l. segregates (Brassicaceae). **Harvard Papers in Botany** 19: 53–71.

Moazzeni H, Zarre S, Pfeil B.E., Bertrand, Y, German D.A, Al-Shehbaz I.A., Mummenhoff K., Oxelman B. (2014) Phylogenetic perspectives on diversification and character evolution in the species-rich genus *Erysimum* (*Erysimeae*; Brassicaceae) based on a densely sampled ITS approach. **Botanical Journal of the Linnean Society** 175: 497–522.

Zozomová-Lihová J., Mandáková T., Kovaříková A, Mülhausen, A., Mummenhoff K., Lysak M. A, Kovařík, A. (2014) When fathers are instant losers: homogenization of rDNA loci in recently formed *Cardamine* × *schulzii* trigenomic allopolyploid. **New Phytologist**: 203:1096-1108 doi: 10.1111/nph.12873

Kiefer M., Schmickl R., German D., Lysak M., Al-Shehbaz I.A., Franzke A., Mummenhoff K., Stamatakis A., Koch M.A. (2013) *BrassiBase*: Introduction to a novel knowledge database on Brassicaceae evolution. **Plant Cell and Physiology** 55: e3(1–9)

Mandáková T, Kovařík A, Zozomová-Lihová J, Shimizu-Inatsugi R, Shimizu KK, Mummenhoff K, Marhold K, Lysak MA (2013) The more the merrier: recent hybridization and polyploidy in *Cardamine*. **Plant Cell** 25: 3280-95. doi: 10.1105/tpc.113.114405.

Mühlhausen, A., Lenser, T., Mummenhoff, K., Theißen, G. (2013) Evidence that an evolutionary transition from dehiscent to indehiscent fruits in *Lepidium* (Brassicaceae) was caused by a change in the control of valve margin identity genes. **Plant Journal** 75: 824–835. doi: 10.1111/tj.12079

Graeber, K., Büttner-Mainik, A., Sperber, K., Mummenhoff, K., Leubner-Metzger, G. (2013) Spatio-temporal seed development analysis provide insight into primary dormancy induction and evolution of the *Lepidium* DELAY OF GERMINATION 1 Genes. **Plant Physiology** 161: 1903-1917

(2010-2012)

Koch, M.A., Kiefer, M., German, D. A., Al-Shehbaz, I.A., Franzke, A., Mummenhoff, K., Schmickl, R. (2012) *BrassiBase*: Tools and biological resources to study characters and traits in the Brassicaceae – version 1.1. **Taxon** 61: 1001-1009.

Mandakova, T., Mummenhoff, K., Al-Shehbaz, I.A., Mucina, L., Mühlhausen, A., Lysak, M. (2012) Whole-genome triplication and species radiation in the southern African tribe Heliophileae (Brassicaceae). **Taxon** 61 989–1000.

Busch, A., Horn, S., Mühlhausen, A., Mummenhoff, K., Zachgo, S. (2012) Corolla monosymmetry, the evolution of a morphological novelty in the Brassicaceae family. **Mol. Biol. Evol.** 29: 1241-54; doi:10.1093/molbev/msr297

Geeta, R., Dávalos, L.M., Levy, A., Bohs, Lavin, M., Mummenhoff, K., Sinha, N., Wojciechowski, M.F. (2012) Keeping it simple: Flowering plants tend to retain, and revert to, simple leaves. **New Phytologist**. 193: 481–493.

Franzke, A., Koch, M.A., Couvreur, T.L.P., Lysak, M.A., Mummenhoff, K. (2011) On the age of the mustard family (Brassicaceae).

<http://www.nature.com/nature/journal/v467/n7317/full/467755d.html>

Al-Shehbaz, I.A, Mummenhoff, K. (2011) *Stubendorffia* and *Winklera* belong to the expanded *Lepidium* (Brassicaceae). **Edinburgh J. Bot.** 68: 165–171.

Warren, B.H., Bakker, F., T., Bellstedt, D.U., Bytebier, B.R., Claßen-Bockhoff, R., Dreyer, L.L., Edwards, D., Forest, F., Galley, C., Hardy, C.R., Linder, H.P., Muasya, A.M., Mummenhoff, K., Oberlander, K.C, Quint, M., Richardson, J.E., Savolainen, V., van der Niet, T., Verboom, G.A., Yesson, C., Hawkins, J.A. (2011) Consistent phenological shifts in the making of a biodiversity hotspot: the Cape flora. **BMC Evolutionary Biology** 11: 39; doi:10.1186/1471-2148-11-39

Franzke, A., Lysak, M.A., Al-Shehbaz, I.A, Koch, M.A., Mummenhoff, K. (2011) Cabbage family affairs: The evolutionary history of Brassicaceae. **Trends Plant Science** 16: 108-116.

Couvreur, T., Franzke, A., Al-Shehbaz, I.A., Bakker, F.T., Koch, M.A., Mummenhoff, K. (2010) Molecular Phylogenetics, Temporal Diversification, and Principles of Evolution in the Mustard Family (Brassicaceae). **Mol. Biol. Evol.** 27: 55-71.

Moazzeni, H., Zarre, S., Al-Shehbaz, I.A., Mummenhoff, K. (2010) Phylogeny of Iranian *Isatis* (Brassicaceae) and allied genera based on ITS sequences of nuclear ribosomal DNA and morphological characters. **Flora** 205: 337–343.

Parolly, G., Nordt, B., Bleeker, W., Mummenhoff, K. 2010. *Heldreichia* Boiss. (Brassicaceae) revisited – a morphological and molecular study. **Taxon** 59: 187-202.

Warwick, S.I., Mummenhoff, K., Sauder, C.A., Koch, M.A., Al-Shehbaz, I.A. (2010) Closing the gaps: phylogenetic relationships in the Brassicaceae based on DNA sequence data of nuclear ribosomal ITS region. **Plant Syst. Evol.** DOI 10.1007/s00606-010-0271-8

Mühlhausen A, Polster A, Theißen G, Mummenhoff K. (2010) Evolution of fruit dehiscence in Brassicaceae – Examples from *Aethionema* and *Lepidium*. In: Hansen M (ed.). **Proceedings of the Vth. International Symposium on Brassicas & XVIth. Crucifer**

Genetics Workshop, Lillehammer. Acta Horticulturae Vol 867, International Society for Horticultural Science, Leuven, pp. 207-219.

Mandakova, T., Joly, S. Krzywinski, M. Mummenhoff, K. Lysak, M. A. (2010) Fast diploidization in close mesopolyploid relatives of *Arabidopsis*. **Plant Cell** 22: 2277–2290

Hasan, A., Mummenhoff, K., Quiros, C., Tay, C., Bailey, D. (2010) Polymorphic chloroplast microsatellite markers in the octoploid *Lepidium meyenii* (Brassicaceae) and cross-species amplification in *Lepidium*. **Am. J. Bot.**: e85–e88.

(2008-2009)

Franzke, A., German, D., Al-Shehbaz, I. A., Mummenhoff, K. (2009) *Arabidopsis* family ties: Molecular phylogeny and age estimates in the Brassicaceae. **Taxon** 58: 425-437.

Verboom, G.A., Archibald, J.K., Bakker, F.T., Bellstedt, D.U., Conrad, F., Dreyer, L.L., Forest, F., Galley, C., Goldblatt, P., Henning, J.F., Mummenhoff, K., Linder, H.P., Muasya, A.M., Oberlander, K.C., Savolainen, V., Snijman, D.A., Niet, T.V., Nowell, T.L. (2009) Origin and diversification of the Greater Cape flora: Ancient species repository, hot-bed of recent radiation, or both? **Mol. Phyl. Evol.** 51: 44-53: doi:10.1016/j.ympev.2008.01.037

Khosravi, A. R., Mohsenzadeh, S., Menke, M., Mummenhoff, K. (2009) A new phylogenetic position and taxonomic classification for *Aethionema trinervium* (DC.) Boiss. (Brassicaceae): a morphologically variable subshrub from southwestern Asia. **Ann. Miss. Bot. Gard.** 96: 564–574.

Khosravi, A. R., Mohsenzadeh, S., Mummenhoff, K. (2009) Phylogenetic relationships of Old World Brassicaceae from Iran based on nuclear ribosomal DNA sequences. **Biochem. Syst. Ecol** 37: 106–115.

Hischemöller, A. Nordmann, J., Ptacek, P., Mummenhoff, K., Haase, M. (2009) In-Vivo Imaging of the Uptake of Upconversion Nanoparticles by living Plants. **Journal of Biomedical Nanotechnology** 5: 1–7.

Mummenhoff, K., Polster, A., Mühlhausen, A., Theißen, G. (2009) *Lepidium* as a model system for studying the evolution of fruit development in Brassicaceae. **J. Exper. Bot.** 60: 1503-1513; doi:10.1093/jxb/ern304

Dierschke, T., Mandáková, T., Lysak, M. Mummenhoff, K. (2009) A bicontinental origin of polyploid Australian/New Zealand *Lepidium* species (Brassicaceae): evidence from genomic in situ hybridization (GISH). **Ann. Bot.** 104: 681-688.

Khosravi, A. R., Mohsenzadeh, S., Mummenhoff, K. (2008) Phylogenetic position of *Brossardia papyracea* (Brassicaceae) based on sequences of nuclear ribosomal DNA. **Feddes Rep.** 119: 13-23.

Khosravi, A. R., Mohsenzadeh, S., Mummenhoff, K. (2008) Analysis of the phylogenetic position of *Acanthocardium erinaceum* (Brassicaceae) based on ITS-sequences shows that it should be transferred to *Aethionema* as *A. erinaceum* (Boiss.) Khosravi & Mummenhoff. **Nordic J. Bot.** 26: 25-30; doi: 10.1111/j.2008.0107-055X.00205.x.

(2006-2007)

Ehrich, D., Gaudeul, M., Assefa, A., Koch, M., Mummenhoff, K., Nemomissa, S., INTRABIODIV Consortium, Brochmann, C. (2007) Genetic consequences of Pleistocene

range shifts: Contrast between the Arctic, the Alps and the East African mountains. **Mol. Ecol.** 16: 2542–2559.

Mummenhoff, K., Franzke, A. (2007) Gone with the bird, Late Tertiary and Quaternary intercontinental long-distance dispersal and allopolyploidization in plants. **Systematics and Biodiversity** 5: 255–260.

Moazzeni, H., Zarre, S., Al-Shehbaz, I.A., Mummenhoff, K. (2007) Seed-coat microsculpturing and its systematic application in *Isatis* (Brassicaceae) and allied genera in Iran. **Flora**. 202: 447–454.

Koch, M., Kiefer, C., Ehrich, D., Vogel, J., Brochmann, C., Mummenhoff, K. (2006) Three times out of Asia Minor: the phylogeography of *Arabis alpina* L. (Brassicaceae). **Mol. Ecol.** 15: 825-839.

Koch, M. A., Mummenhoff, K. (2006) Editorial, Evolution and phylogeny of the Brassicaceae, in: Koch, M. A., Mummenhoff, K. (Eds.) Evolution and Phylogeny of the Brassicaceae. **Plant Syst. Evol.** Special Vol. 259, pp. 1-83.

Koch, M. A., Mummenhoff, K., eds., (2006) Evolution and Phylogeny of the Brassicaceae. **Plant Syst. Evol.** Special Vol. 259, pp. 81-258.

Mummenhoff, K., Linder, P., Friesen, N., Bowman, J.L., Franzke, A. (2006) African species of *Lepidium* (Brassicaceae) contributed via hybridization to the origin of Australian / New Zealand species, in: Ghanzanfar S.A., Beentje H. (Eds.). Taxonomy and ecology of African plants, their conservation and sustainable use. Royal Botanic Gardens, Kew, pp. 291-308.

Bailey, C.D., Marcus A. Koch, M. A., Mayer, M., Mummenhoff, K., O’Kane, Jr., S. L., Warwick S. I., Windham, M. D., Al-Shehbaz, I. A. (2006) Towards a global nrDNA ITS phylogeny of the Brassicaceae. **Mol. Biol. Evol.** 23, 2142-2160.

(2004-2005)

Al-Shehbaz, I. A., Mummenhoff, K. (2005) Transfer of the South African genera *Brachycarpha*, *Cycloptychis*, *Schlechteria*, *Silicularia*, and *Thlaspeocarpa* to *Heliophila* (Brassicaceae). **Novon** 15: 385-389.

Mummenhoff, K., Al-Shehbaz, I., Linder, P., Bakker, F., Mühlhausen, A. (2005) Phylogeny, morphological evolution, and speciation of endemic Brassicaceae genera in the Cape flora, southern Africa. **Annals of the Missouri Bot. Gard.** 92: 400-424.

Mummenhoff, K., Bowman, J.L., Linder, P., Friesen, N., Franzke, A. (2004) Molecular evidence for bicontinental hybridogenous genomic constitution in *Lepidium sensu stricto* (Brassicaceae) species from Australia and New Zealand. **Am. J. Bot.** 91: 252-259.

Warwick, S.I., Al-Shehbaz, I.A., Sauder, C.A., Murray, D.F., Mummenhoff, K. (2004) Phylogeny of *Smelowskia* and related genera (Brassicaceae) based on nuclear ITS DNA and chloroplast trnL intron DNA sequence. **Ann. Miss. Bot. Gard.** 91: 99-123.

Franzke, A., Hurka, H., Janssen, D., Neuffer, B., Friesen, N., Markov, M., Mummenhoff, K. (2004) Molecular signals for late Tertiary/Early Quaternary range splits of an Eurasian steppe plant: *Clausia aprica* (Brassicaceae). **Mol. Ecol.** 13: 2789-2795.

(2000-2003)

Koch, M., Al-Shehbaz, I. A. Mummenhoff, K. (2003) Molecular systematics, evolution and population biology of the mustard family Brassicaceae. **Ann. Miss. Bot. Gard.** 90: 151-171.

Al-Shehbaz, I. A., Mummenhoff, K., Appel, O. (2002) *Cardaria*, *Coronopus*, and *Stroganowia* are united with *Lepidium* (Brassicaceae). **Novon** 12: 5-11.

Lee, J.-Y., Mummenhoff, K., Bowman, J.L. (2002) Allopolyploidizations and evolution of species with reduced floral structures in *Lepidium* L. (Brassicaceae). **Proc. Natl. Acad. Sci. USA**. 99: 16835-16840.

Koch, M., Al-Shehbaz, I. A. Mummenhoff, K. (2002) Molecular systematics, evolution and population biology of the mustard family Brassicaceae. **Annals of the Missouri Bot. Gard.** 90: 151-171.

Eschmann-Grupe, G., Neuffer, B., Paetsch, M., Mummenhoff, K., Hurka, H. (2001) Speciation, breeding system and genetic variation in colonising *Diplotaxis* species. In: Kowarik, I., Starfinger, U. (Hrsg.) Biological Invasions in Germany – a challenge to act. BfN-Skripten 32: 71-72.

Koch, M. & Mummenhoff, K.(2001)*Thlaspi* s.str. (Brassicaceae) versus *Thlaspi* s.l.: morphological and anatomical characters in the light of ITS nrDNA sequence data. **Plant Syst. Evol.** 227: 209-225.

Mummenhoff, K., Coja, U., Brüggemann, H. (2001) *Pachyphragma* (Brassicaceae) revisited: molecular data indicate close relationship to *Thlaspi* s.str. **Folia Geobot.** 36: 293-302

Mummenhoff, K. Brüggemann, H., Bowman, J. (2001) Chloroplast DNA phylogeny and biogeography of *Lepidium* (Brassicaceae). **Am. J. Bot.** 88: 2051-2063.

(1995-1999)

Franzke, A., Mummenhoff, K. (1999) Recent hybrid speciation in *Cardamine* (Brassicaceae). Conversion of nuclear ribosomal ITS sequences in statu nascendi. **Theor. Appl. Genet** 98: 831-834.

Koch, M., Mummenhoff, K., Hurka, H. (1999): Molecular phylogenetics of *Cochlearia* L. and allied genera based on nuclear ribosomal ITS DNA sequence analysis contradict traditional concepts of evolutionary relationships. **Plant Syst. Evol.** 216: 207-230.

Zunk, K., Mummenhoff, K., Hurka, H. (1999) Phylogenetic relationships in tribe Lepidieae (Brassicaceae) based on chloroplast DNA restriction site variation. **Can. J. Bot.** 77: 1504-1512.

Bowman, J., Brüggemann, H., Lee, J.-Y., Mummenhoff, K. (1999) Evolutionary changes in floral architecture within the genus *Lepidium* (Brassicaceae). **Int. J. Plant Sci.** 160: 917-929.

Koch, M., Hurka, H., Mummenhoff, K. (1998) Molecular biogeography and evolution of the *Microthlaspi perfoliatum* s.l. polyploid complex (Brassicaceae): chloroplast DNA and nuclear ribosomal DNA restriction site variation. **Can. J. Bot.** 76: 382-396.

Urbanska, K., Hurka, H., Landolt, E., Neuffer, B., Mummenhoff, K. (1997) Hybridization and evolution in *Cardamine* (Brassicaceae) at Urnerboden, Central Switzerland: biosystematic and molecular evidence. **Plant Syst. Evol.** 204: 233-256.

Mummenhoff, K., Franzke, A., Koch, M. (1997) Molecular phylogenetics of *Thlaspi* (Brassicaceae) based on chloroplast DNA restriction site variation and sequences of the internal transcribed spacers of nuclear ribosomal DNA. **Can. J. Bot.** 75: 469-482.

Mummenhoff, K., Franzke, A., Koch, M. (1997) Molecular data reveal convergence in fruit characters used in the classification of *Thlaspi* s.l. (Brassicaceae). **Bot. J. Linn. Soc.** 125: 183-199.

Zunk, K., Mummenhoff, K., Koch, M., Hurka, H. (1996) Phylogenetic relationships of *Thlaspi* s.l. (subtribe Thlaspidinae, Lepidieae) and allied genera based on chloroplast DNA restriction site variation. **Theor. Appl. Genet.** 92: 375-381.

Koch, M., Hurka, H., Mummenhoff, K. (1996) Chloroplast DNA restriction site variation and RAPD-analyses in *Cochlearia* (Brassicaceae): Biosystematics and speciation. **Nord. J. Bot.** 16: 585-603.

Mummenhoff, K. (1995): Should *Cardaria* (L.) Desv. be classified within the genus *Lepidium* L. (Brassicaceae)? Evidence from subunit polypeptide composition of Rubisco. **Feddes Repert.** 106: 25-28.

Mummenhoff, K., Kuhnt, E., Koch, M., Zunk, K. (1995) Systematic implications of chloroplast DNA variation in *Lepidium* sections *Cardamon*, *Lepiocardamon* and *Lepia* (Brassicaceae). **Plant Syst. Evol.** 196: 75-88.

Mummenhoff, K., Hurka, H. (1995) Allopolyploid origin of *Arabidopsis suecica* (Fries) Norrlin: Evidence from chloroplast and nuclear genome markers. **Botanica Acta** 108: 449-456.

(1986-1994)

Mummenhoff, K. (1994) Subunit polypeptide composition of Rubisco as a taxonomic tool in separating critical *Lepidium* species. **Phytochemistry** 35: 683-684.

Mummenhoff, K., Jentzsch, M. (1994) Isoelectric focusing analysis of Rubisco in the genus *Erysimum* L. **Eucarpia Cruciferae Newsletter** 16: 16-17.

Mummenhoff, K. & Hurka, H. (1994) Subunit polypeptide composition of Rubisco and the origin of allopolyploid *Arabidopsis suecica* (Brassicaceae). **Biochem. Syst. Ecol.** 22: 807-812.

Mummenhoff, K., Koch, M. (1994) Chloroplast DNA restriction site variation and phylogenetic relationships in the genus *Thlaspi* sensu lato (Brassicaceae). **Syst. Bot.** 19: 73-88.

Koch, M., Mummenhoff, K., Zunk, K. (1993) Isoelektrische Fokussierung der Untereinheiten der Rubisco in *Thlaspi* (Brassicaceae): Weitere Hinweise auf eine Formengattung. **Feddes Repert.** 104: 371-381.

Koch, M., Plantholt, U., Zunk, K., Mummenhoff, K., Hurka, H. (1993) Chloroplasten-DNA als Marker zur Sippendifferenzierung. In K.-G. Bernhardt, H. Hurka & P. Poschlod (Hrsg.), *Biologie semiaquatischer Lebensräume - Aspekte der Populationsbiologie*, 85-100. Verlag Natur und Wissenschaften, Solingen.

Mummenhoff, K., Eschmann-Grupe, G., Zunk, K. (1993): Subunit polypeptide composition of Rubisco indicates *Diplotaxis viminea* as maternal parent species of amphiploid *Diplotaxis muralis*. **Phytochemistry** 34: 429-431.

Zunk, K., Mummenhoff, K., Hurka, H. (1993) Chloroplast DNA restriction site variation in the Brassicaceae tribe Lepidieae. **Plant Mol. Evol. Newsl.** 3: 40-44.

Hurka, H., Mummenhoff, K., Schoppmann, C. (1992) Chromosome numbers in the genus *Lepidium* (Brassicaceae): **IOPB Newsletter** 18/19: 8-9.

Mummenhoff, K., Hurka, H., Bandelt, H.-J. (1992) Systematics of Australian *Lepidium* species (Brassicaceae) and implications for their origin: evidence from IEF analysis of Rubisco. **Plant Syst. Evol.** 183: 99-112.

- Mummenhoff, K., Hurka, H. (1991) IEF analysis of Rubisco in *Lepidium* (Brassicaceae), sections *Lepia*, *Lepiocardamon* and *Cardamon*. **Biochem. Syst. Ecol.** 19: 47-52.
- Mummenhoff, K., Zunk, K. (1991) Should *Thlaspi* (Brassicaceae) be split? Preliminary evidence from isoelectric focusing analysis of Rubisco. **Taxon** 40: 427-434.
- Mummenhoff, K., Hurka, H. (1990) Evolution of the tetraploid *Capsella bursa-pastoris* (Brassicaceae): isoelectric focusing analysis of Rubisco. **Plant Syst. Evol.** 172: 205-213.
- Mummenhoff, K., Hurka, H. (1986) Rubisco as a taxonomic tool: Introducing a simple electrophoretic technique for separating the holoenzyme. **Plant Syst. Evol.** 153: 281-285.