

孙元丰, 万宏伟, 赵玉金, 陈世苹, 白永飞 (2018). 中国草地生态系统根系周转的空间格局和驱动因子. *植物生态学报*, 42, 337–348. DOI: 10.17521/cjpe.2017.0241

Sun YF, Wan HW, Zhao YJ, Chen SP, Bai YF (2018). Spatial patterns and drivers of root turnover in grassland ecosystems in China. *Chinese Journal of Plant Ecology*, 42, 337–348. DOI: 10.17521/cjpe.2017.0241

<http://www.plant-ecology.com/CN/10.17521/cjpe.2017.0241>

附录I 数据提取文献来源

Appendix I List of papers from which data are extracted for this database

Bai YF, Xu ZX, Li DX (1994). Study on seasonal fluctuations of biomass for *Leymus chinense* grassland. *Grassland of China*, 14, 1–5. (in Chinese with English abstract) [白永飞, 许志信, 李德新 (1994). 羊草草原群落生物量季节动态研究. *中国草地*, 14, 1–5.]

Chai X, Liang CZ, Liang MW, Han WH, Li ZY, Miao BL, Wang W, Wang LX (2014). Seasonal dynamics of belowground biomass and productivity and potential of carbon sequestration in meadow steppe and typical steppe, in Inn Mongolia, China. *Acta Ecologica Sinica*, 34, 5530–5540. (in Chinese with English abstract) [柴曦, 梁存柱, 梁茂伟, 韩伟华, 李智勇, 苗百岭, 王伟, 王立新 (2014). 内蒙古草甸草原与典型草原地下生物量与生产力季节动态及其碳库潜力. *生态学报*, 34, 5530–5540.]

Chen WQ, Huang D, Liu N, Zhang YJ, Badgery WB, Wang XY, Shen Y (2015). Improved grazing management may increase soil carbon sequestration in temperate steppe. *Scientific Repport*, 5, 10892–10904.

Chen ZZ, Huang DH (1988). Belowground biomass and turnover value of *Leymus chinense* and *Stipa grandis* steppes in the Xilin River, Inner Mongolia. In: Inner Mongolia Grassland Ecosystem Research Station, Chinese Academy of Science ed. *Research on Grassland Ecosystem No. 2*. Science Press, Beijing. 20–25. (in Chinese) [陈佐忠, 黄德华 (1988). 内蒙古锡林河流域羊草草原与大针茅草原地下生物量与降水量关系模型探讨. 见: 中国科学院内蒙草原生态系统研究站主编. 草原生态系统研究(II). 科学出版社, 北京. 20–25.]

Chen ZZ, Huang DH (1988). A measurement to underground productivity and turnover value of *Aneurolepidium chinense* and *Stipa grandis* grassland at Xilin river valley, Inner Mongolia. In: Inner Mongolia Grassland Ecosystem Research Station, Chinese Academy of Science ed. *Research on Grassland Ecosystem No. 2*. Science Press, Beijing. 132–138. (in Chinese) [陈佐忠, 黄德华 (1988). 内蒙古锡林河流域羊草草原与大针茅草原地下部分生产力和周转值的研究. 见: 中国科学院内蒙草原生态系统研究站主编. 草原生态系统研究(II). 科学出版社, 北京. 132–138.]

Feng YF (1990). Estimates of belowground biomass and turnover of *Stipa klemenzii* shrub desert steppe in Inner Mongolia. *Inner Mongolia Prataculture*, (3), 27–31. [冯雨峰 (1990). 内蒙古灌丛化石生针茅荒漠草原地下生物量与周转值的测定. *内蒙古草业*, (3), 27–31.]

Gao YZ, Chen Q, Lin S, Giese M, Brueck H (2011). Resource manipulation effects on net primary production, biomass allocation and rain-use efficiency of two semiarid grassland sites in Inner Mongolia, China. *Oecologia*, 340, 253–264.

Gao YZ, Giese M, Lin S, Sattelmacher B, Zhao Y, Brueck H (2008). Belowground net primary productivity and biomass allocation of a grassland in Inner Mongolia is affected by grazing intensity. *Plant and Soil*, 307, 41–50.

Hu ZZ, Sun JX, Li Y, Long RJ, Yang FL (1994). The characteristics of biomass and conversion efficiency of solar radiation for principal types of alpine grasslands in Tianzhu, Gansu Province. *Acta Phytoecologica Sinica*, 18, 121–131. (in Chinese with English abstract) [胡自治, 孙吉雄, 李洋, 龙瑞军, 杨发林 (1994). 甘肃天祝主要高山草地的生物量及光能转化率. *植物生态学报*, 18, 121–131.]

- Hu ZZ, Sun JX, Zhang YS, Xu CL, Zhang ZH (1988a). Primary production in Tianzhu alpine *Polygonum viviparum* meadow: biomass dynamics and conversion efficiency for solarradiation. *Acta Phytoecologica et Geobotanica Sinica*, 12, 123–133. (in Chinese with English abstract) [胡自治, 孙吉雄, 张映生, 徐长林 (1988a). 祝高寒珠芽移草甸初级生产力的研究.I生物最动态及光能转化率. 植物生态学与地植物学学报, 12, 123–133.]
- Hu ZZ, Sun JX, Zhang YS, Xu CL, Zhang ZH (1988b). Production and efficiency of energy in Tianzhu alpine *Kobresia capillifolia* grassland: structure of community and dynamics of phytomass. *Pratacultural Science of China*, 5, 7–13. (in Chinese with English abstract) [胡自治, 孙吉雄, 张映生, 徐长林, 张自和 (1988b). 甘肃天祝高山线叶篙草草地的第一性物质生产和能量效率. 中国草业科学, 5, 7–13.]
- Huang DQ, Yu L, Zhang YS, Zhao XQ (2011). A study on grassland biomass and their relationships with meteorological factors in the northern slopes of the Mountains Qilian. *Acta Prataculturae Sinica*, 20, 1–10. (in Chinese with English abstract) [黄德清, 于兰, 张耀生, 赵新全 (2011). 祁连山北坡草地生物量及其与气象因子的关系. 草业学报, 20, 1–10.]
- Li GD (1990). Underground phytomass and its seasonal dynamics in alpine grass-Kobresia meadow of Tianzhu Area, Gansu. *Acta Prataculturae Sinica*, 1, 42–46. (in Chinese with English abstract) [李光棣 (1990). 高寒禾草——嵩草型草地地下植物量及其季节动态的研究. 草业学报, 1, 42–46.]
- Li JZ, Lin S, Taube F, Pan QM, Dittert K (2011). Above and belowground net primary productivity of grassland influenced by supplemental water and nitrogen in Inner Mongolia. *Plant and Soil*, 340, 253–264.
- Li XL, Li FJ, Huang BN, Qiao YM, Sun HS, Sun BC (1996). Biomass allocation and seeding development of *Kobresia* on Tibetan Plateau. *Acta Prataculturae Sinica*, 5, 48–54. (in Chinese with English abstract) [李希来, 李发吉, 黄葆宁, 乔有明, 孙海松, 孙保琛 (1996). 青藏高原几种嵩草的生物量及其幼苗发育的初步研究. 草业学报, 5, 48–54.]
- Li YN (1998). Relationship between underground biomass and meteorological conditions and turnover value of alpine meadow plants. *Chinese Journal of Agrometeorology*, 19, 36–38. [李英年 (1998). 高寒草甸植物地下生物量与气象条件的关系及周转值分析. 中国农业气象, 19, 36–38.]
- Liu LL, Wu ZL, Li Q (2006). A study on belowground biomass and net primary production of sub-alpine meadow in Northwest Yunnan Province. *Journal of Yunnan University*, 28, 314–318. (in Chinese with English abstract) [刘玲玲, 吴兆录, 李青 (2006). 滇西北亚高山草地的地下生物量及净初级生产力研究. 云南大学学报 (自然科学版), 28, 314–318.]
- Ma KP, Zhou RC, Guo YS (1992). Formation pattern of belowground biomass in *Calamagrostis angustifolia* grassland. *Pratacultural Science of China*, 9, 24–28. (in Chinese with English abstract) [马克平, 周瑞昌, 郭亚胜 (1992). 小叶章草甸地下生物量形成规律的研究. 草业科学, 9, 24–28.]
- Shen YY, Yan SG, Zhu XY, Zhao Y (1995). Primary productivity of saline pasture in Hexi Corridor. *Acta Prataculturae Sinica*, 4, 44–57. (in Chinese with English abstract) [沈禹颖, 阎顺国, 朱兴运, 赵银 (1995). 河西走廊几种盐化草地第一性生产力的研究 I 地上生物量与地下生物量季节动态及分配. 草业学报, 4, 44–57.]
- Wang SL, Jin M, Zhang XL, Li XY, Zhu H, Wang XC (2014). Comparative study on natural mountain grassland biomass under condition of different enclosure. *Journal of Central South University of Forestry & Technology*, 34, 130–135. (in Chinese with English abstract) [王顺利, 金 铭, 张学龙, 李小燕, 朱 红, 王旭春 (2014). 不同封育条件下天然草地生物量对比研究. 中南林业科技大学学报, 34, 130–135.]
- Wang XL, Zhang L, Zhang DG, Gan YM, Xu GP, Yang YH, Miao XL, Zhou XH, Deng CH, Guan QZX (2006a). Study on comparison of underground phytomass of *Stipa purpurea* steppe under moderate and heavy degradation. *Grassland and Turf*, 4, 15–24. (in Chinese with English abstract) [王小利, 张力, 张德罡, 干友民, 徐广平, 杨予海, 苗小林, 周学辉, 邓春辉, 官却扎西 (2006a). 青海湖地区紫花针茅型中度与重

- 度退化草地地下植物量的比较研究. 草原与草坪, (4), 15–24.]
- Wang XL, Zhang L, Zhang DG, Gan YM, Xu GP, Yang YH, Miao XL, Zhou XH, Deng CH, Guan QZX (2006b). Studies on underground biomass of moderate degradation of *Kobresia capillifolia* grassland in Qinghai Lake area. *Grassland and Turf*, 1, 24–27. (in Chinese with English abstract) [王小利, 张力, 张德罡, 干友民, 徐广平, 杨予海, 苗小林, 周学辉, 邓春辉, 官却扎西 (2006b). 青海湖地区中度退化线叶嵩草型草地地下植物量的研究. 草原与草坪, (1), 24–27.]
- Wu YB, Deng YC, Tan HC, Du YG, Gu S, Tang YH, Cui XY (2011). Comprehensive assessments of root biomass and production in a *Kobresia humilis* meadow on the Qinghai-Tibetan Plateau. *Plant and Soil*, 338, 497–510.
- Xiao XM, Chen D, Peng YM, Cui XY, Ojima DS (1996). Observation and modeling of plant biomass of meadow steppe in Tumugi, Xingan league, Inner Mongolia, China. *Vegetatio*, 127, 191–201.
- Xing F, Zhu TC (1992). Biomass and net primary productivity of *Filifolium sibiricum* grassland in eastern Inner Mongolia. *Acta Phytocologica et Geobotanica Sinica*, 16, 149–157. (in Chinese with English abstract) [邢福, 祝廷成 (1992). 内蒙古东部线叶菊草地生物量与净第一性生产力的初步研究. 植物生态学与地植物学学报, 16, 149–157.]
- Yang FT, Lu GQ, Shi SH (1985). The structure characteristics and production of alpine *Kobresia humilis* meadow. *Acta Biologica Plateau Sinica*, 4, 49–56.
- Yang FT, Wang QJ, Shi SH (1987). The allocation of biomass and energy in *Kobresia humilis* meadow in Haibei District, Qinghai Province. *Acta Phytocologica et Geobotanica Sinica*, 11, 106–112. (in Chinese with English abstract) [杨福屯, 王启基, 史顺海 (1987). 青海海北地区矮篙草草甸生物量和能量的分配. 植物生态学与地植物学学报, 1, 106–112.]
- Yang TT, Gao Y, Wu XH, Li P, He J, Wu H (2013). Vertical distribution of belowground biomass in the *Stipa klemenzill* steppe. *Journal of Northwest A&F University (Natural Science Edition)*, 41, 183–188. (in Chinese with English abstract) [杨婷婷, 高永, 吴新宏, 李鹏, 贺晶, 吴昊 (2013). 小针茅草原地下生物量的垂直分布规律. 西北农林科技大学学报(自然科学版), 41, 183–188.]
- Zhang J, Zhang SR (2009). Community structure characteristics and belowground biomass change of different land types under different degradation conditions. *Heilongjiang Animal Science and Veterinary Medicine*, 17, 60–62. [张静, 张生荣 (2009). 不同退化程度下紫花针茅草地群落结构特征与地下生物量的变化. 黑龙江畜牧兽医, 17, 60–62.]
- Zhang JF, Xu YQ (2016). Responses of plant biomass and net primary production to nitrogen fertilization and increased precipitation in re-grassed croplands in Duolun County of Inner Mongolia, China. *Chinese Journal of Eco-Agriculture*, 24, 192–200. (in Chinese with English abstract) [张金凤, 徐雨晴 (2016). 水氮添加对内蒙古多伦县退耕还草地生物量、生产力及其分配的影响. 中国生态农业学报, 24, 192–200.]
- Zhang N, Liang YM (1999). Comparative studies on belowground growth and its relationship with soil moisture in two natural grasslands, Loess hilly region. *Acta Botanica Boreal and Occident Sinica*, 19, 699–706. (in Chinese with English abstract) [张娜, 梁一民 (1999b). 黄土丘陵区两类天然草地群落地下部生长及其与土壤水分关系的比较研究. 西北植物学报, 19, 699–706.]
- Zhang SY, Li DX (1997). Effect of grazing to underground productivity and nitrogen turnover of *Stipa breviflora* steppe. *Grassland of China*, 17, 13–18. (in Chinese with English abstract) [张淑艳, 李德新 (1997). 放牧对短花针茅草原地下部分生产力及氮素周转率的影响. 中国草地, 17, 13–18.]
- Zhu ZC, Jia DL (1991). Biomass of *Themeda triandra* var. *japonica* community in Loess Plateau in North Shaanxi Province. *Acta Ecologica Sinica*, 11, 117–124. (in Chinese with English abstract) [朱志诚, 贾东林 (1991). 陕北黄土高原黄背草群落生物量初步研究. 生态学报, 11, 117–124.]
- Zhu ZC, Jia DL (1993). Biomass of *Artemisia gmelinii* community in the Loess Plateau in North Shaanxi Province. *Acta Ecologica Sinica*, 13, 243–251. (in Chinese with English abstract) [朱志诚, 贾东林 (1993). 陕北黄土

高原铁杆蒿群落生物量初步研究. 生态学报, 13, 243–251.]

Zhu ZC, Jia DL, Yue M (1993). Biomass of *Artemisia gmelinii* community in the Loess Plateau in North Shaanxi Province. *Grassland of China*, (5), 6–13.. (in Chinese with English abstract) [朱志诚, 贾东林, 岳明 (1993). 艾蒿群落生物量初步研究. 中国草地, (5), 6–13.]

Zhu ZC, Jia DL (1995). Biomass of *Miscanthus sinensis* community on the Loess Plateau of North Shaanxi Province. *Chinese Journal of Applied Ecology*, 6, 265–270. (in Chinese with English abstract) [朱志诚, 贾东林 (1995). 陕北黄土高原霸王管群落生物量初步. 应用生态学报, 6, 265–270.]

Zhu ZC, Jia DL (1996a). Biomass of *Calamagrostis pseudophragmites* community. *Acta Ecologica Sinica*, 16, 40–49. [朱志诚, 贾东林 (1996a). 假苇拂子茅群落生物量初步研究. 生态学报, 16, 40–49.]

Zhu ZC, Jia DL (1996b). Biomass of *Leymus dasystachys* community. *Grassland of China*, 6, 14–16. (in Chinese with English abstract) [朱志诚, 贾东林 (1996b). 赖草群落生物量初步研究. 中国草地, 6, 14–16.]

Zu YG (1991). Primary productivity of *Leymus chinense* rangeland in Northeast China. *Bulletin of Botanical Research*, 11, 117–122.