

## **Professor L.E. NEWTON**



Professor Emeritus Leonard E. Newton, MSc, PhD, DipEd, FLS, FBS.

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### **Main teaching subjects before retirement**

Plant Taxonomy, Biosystematics, Anthecology, Palynology, Evolution.

### **Postgraduate student supervision**

Since joining KU I have successfully supervised 15 M.Sc. students and 11 Ph.D. students. In addition to plant taxonomy, research projects have included investigations of plants used in herbal medicine, ethnobotany, and pollination of crop plants.

### **Other responsibilities**

Chairman, Department of Botany, 1999–2003.

Chairman or member of various committees, at Senate, School and Department level, including:

University Promotions and Appraisal Committee (Chairman 1995–1997).

Senate Committee for revision of Academic Dress (Chairman from 2002).

### **Research interests**

Taxonomy of plants in arid regions, especially succulent plants.

Anthecology.

Ethnobotany.

Floristic studies — exploration of little-known areas in Africa and Arabia.

Current funded projects:

Aloes of Kenya book (with Dr. E. Wabuye) — NOK 25,000 (US\$ 4,317) from University of Oslo.

Further studies on genus Aloe (with Dr. E. Wabuye) — €1,000 from Deutsche Kakteen-Gesellschaft.

Botanical inventory of relic wooded grasslands in Wote Division, Makueni County (with Dr. I. Malombe & Mr. P. Kirika) — £1990 from the Linnean Society of London. Currently revising my contributions to the multi-authored 6-volume *Illustrated Handbook of Succulent Plants*.

### Research output

Over 500 publications, including the description and naming of over 60 new plant species.

Main books (including chapters in multi-authored books):

Chapters on aquatic macrophytes, in D.M. John, *The Inland Waters of Tropical West Africa*. Schweizerbart'sche, Stuttgart, 1986.

Aloaceae. In A.D.Q. Agnew & S. Agnew, *Upland Kenya Wild Flowers*, edn. 2. East Africa Natural History Society, Nairobi, 1994.

Aloaceae, Cucurbitaceae (all genera), and genera *Aloe*, *Calyptrorhiza*, *Gasteraloe* & *Sansevieria*. In: U. Egli (ed.), *Illustrated Handbook of Succulent Plant*. 6 vols. Springer, Berlin, 2001–2002.

Aloes in habitat. Chapter in T. Reynolds (ed.), *Aloes. The Genus Aloe*. [Medicinal and Aromatic Plants – Industrial Profiles: vol. 38.] CRC Press, Boca Raton, 2004.

Egli, U. & Newton, L.E. *Etymological Dictionary of Succulent Plant Names*. Springer, Berlin, 2004.

Newton, L.E. *The History of Succulent Plants in Kenya*. East Africa Natural History Society, Nairobi, 2004.

Newton, L.E. *The Pollination of East African Succulent Plants*. East Africa Natural History Society, Nairobi, 2005.

Newton, L.E. *An ABC for Succulent Plant Enthusiasts*. East Africa Natural History Society, Nairobi, 2009.

Several species accounts in G.H. Schmelzer & A. Gurib-Fakim (ed.), *Plant Resources of Tropical Africa 11(1), Medicinal Plants 1*. PROTA Foundation, Wageningen. 2008. [also accessible at <http://www.prota.org>].

Carter, S., Lavranos, J.J., Newton, L.E. & Walker, C.C. *Aloes: The Definitive Guide*. Royal Botanic Gardens, Kew, 2011.

Newton, L.E. (2011) *Kenyatta University Academic Dress*. Kenyatta University, Nairobi.

Newton, L.E. *Uses of Succulent Plants in East Africa*. Nature Kenya, Nairobi, 2011.

Newton, L.E. (2013) *Sansevieria* Thunb., *Aloe* L. In A.D.Q. Agnew, *Upland Kenya Wild Flowers and Ferns* (Edn. 3): 365–370. Nature Kenya, Nairobi.

Founder and Chief Editor (1998–2005) of *East African Journal of Science*, the journal of the School of Pure and Applied Sciences, later (after split into 2 journals) *East African Journal of Life Sciences*.

Other recent publications

Newton, L.E. (2009) The identity of *Sansevieria arborescens* (Ruscaceae), with an amplified description, and description of a new species. *Bradleya* 27: 153–158.

Newton, L.E. (2009) Comments on “*Sansevieria bacularis*”. *Journal of the International Sansevieria Society* 21: 15–16.

Musili, P.M., Muasya, A.M. & Newton, L.E. (2010) Taxonomic studies of the *Cyperus rotundus* complex (Cyperaceae) in East Africa. In: X. van den Burgh, J. van der Maesen & J.N. Onana (eds.), *Systematics and Conservation of African Plants*: 67–74. Royal Botanic Gardens, Kew.

Newton, L.E. (2010) An apothecary's jar for Aloe products. *CactusWorld* 28: 17–18.

- Newton, L.E. (2010) Notes on *Sansevieria ballyi*, with description of a new cultivar. *Journal of the International Sansevieria Society* 22: 10–12.
- Newton, L.E. (2010) *Sansevieria* family relationships. *Journal of the International Sansevieria Society* 22: 19.
- Njoroge, G.N., Gemmill, B., Bussmann, R., Newton, L.E. & Ngumi, V.M. (2010) Diversity and efficiency of wild pollinators of watermelon (*Citrullus lanatus* (Thunb.) Mansf.) at Yatta (Kenya). *Journal of Applied Horticulture* 12(1): 35–41.
- Newton, L.E. (2010) Two new caulescent species of *Sansevieria* (Asparagaceae) in Kenya. *Bradleya* 28: 19–26.
- Ngari, F.W. & Newton, L.E. (2010) Rediscovery of *Ixora scheffleri* ssp. *keniensis*. *Journal of East African Natural History* 99: 235–236.
- Karanja, R.H.N., Njoroge, G.N., Gikungu, M.W. & Newton, L.E. (2010) Bee interactions with wild flora around organic and conventional coffee farms in Kiambu district, central Kenya. *Journal of Pollination Ecology* 1(2): 7–12.
- Kolm, L. & Newton, L.E. (2011) Phenotype variation of *Aloe lateritia* var. *graminicola*. *Haworthiad* 25: 18–21.
- Ngugi, G., Newton, L.E. & Muasya, M. (2011) The Contribution of Forest Products to Dryland Household Economy: The case of Kiang'ombe hill forest, Kenya. *Ethnobotany Research & Applications* 9: 163–180.
- Newton, L.E. (2011) Two new species of *Aloe* in Kenya. *Bradleya* 29: 57–60.
- Karanja, R.H.N., Gikungu, M.W., Njoroge, G.N., Newton, L.E. & Kihoro, J.M. (2011) Comparison of Bee Pollinators of Coffee in Organic and Conventional Farms. *Asian Journal of Agricultural Sciences* 3(6): 469–474.
- Newton, L.E. & Webb, R.H. (2011) The Tanzanian “*Sansevieria grandicuspis*” unmasked. *Journal of East African Natural History* 100: 141–144.
- Newton, L. (2012) A hairy delosperma in Kenya. *Mesemb Study Group Bulletin* 27: 21–22.
- Newton, L. (2012) What is the world’s largest tuberous plant? *The Cactus Explorer* 5: 35–37.
- Newton, L.E. (2012) The identity of *Sansevieria bagamoyensis*. *Bradleya* 30: 103–106.
- Newton, L.E. (2012) Keynote paper: Taxonomy and Evolutionary Biology. In: V. Wasonga, A. Lusweti, C. Lange, C. Handa & E. Wabuye (Eds.), *Heritage Management for Sustainable Development. Proceedings of 3<sup>rd</sup> National Museums of Kenya Biennial Scientific Conference*: 1. National Museums of Kenya, Nairobi.
- Newton, L.E. (2012) Going, going, nearly gone — a highly endangered tree species in Kenya. *Euphorbia World* 8(3): 27–30.
- Newton, L.E. (2013) The genus *Aloe* in West Africa. *The Nigerian Field* 77: 21–24.
- Newton, L. (2013) An aloe miscellany. *Aloe* 50: 58–60.
- Takawira-Nyenya, R., Newton, L.E., Wabuye, E. & Stedje, B. (2014) Ethnobotanical uses of *Sansevieria* Thunb. (Asparagaceae) in Coast Province of Kenya. *Ethnobotany Research & Applications* 12: 51–69.
- McCoy, T. & Newton, L.E. (2014) A new shrubby species of *Aloe* in the Imatong Mountains, Southern Sudan. *Haseltonia* 19: 64–65.

## Conferences

In addition to papers read in departmental seminars in Kenyatta University (Kenya), Kumasi University (Ghana), Michigan University (U.S.A.) and Oxford University (U.K.), I have read papers at various international conferences in: Adelaide (Australia); Brisbane (Australia); Natal (Brazil); Havana (Cuba); Bonn (Germany); Bologna (Italy), Verbania (Italy); Nairobi (Kenya); Zomba (Malawi); Mexico City (Mexico); Monte Carlo (Monaco), Blyde Canyon (South Africa); Cape Town (South Africa); Johannesburg (South Africa); Pretoria (South Africa); Barcelona (Spain); London (UK); Manchester (UK); Oxford (UK); Reading (UK); Austin (Texas, U.S.A.); Los Angeles (California, U.S.A.); Santa Barbara (California, U.S.A.); Tucson (Arizona, U.S.A.); Harare (Zimbabwe).

## Outside activities

### Local —

President, Kenya Chapter, Society for Economic Botany.

Chairman of Succulenta East Africa, a specialist group in the East Africa Natural History Society.

Member of the University Council, Mount Kenya University, Thika.

Member, Board of Directors, Kenya Aloe Network. (promoting Aloe farming in arid areas, for poverty alleviation).

Hon. Editor of quarterly newsletter, *Succulent News*, East Africa Natural History Society, Nairobi.

Accredited judge for flower shows of the Kenya Horticultural Society.

Honorary Life Member, Kenya Horticultural Society.

### Overseas —

President, International Organisation for Succulent Plant Study (IOS), 2006–2012.

Honorary Research Associate, Royal Botanic Gardens, Kew, UK.

Member of Species Survival Commission Cacti/Succulent Specialist Group of the IUCN (International Union for Conservation of Nature and Natural Resources).

Member, Editorial Advisory Board of *Thaiszia Journal of Botany*, Slovakia.

### External Examiner

For written examinations and theses — University of Nairobi (Kenya), Moi University (Kenya), Makerere University (Uganda), Oslo University (Norway), Rand Afrikaans University (South Africa).

### Referee

For manuscripts submitted for publication in: *Biochemical Systematics and Ecology* (Aberdeen University, U.K.); *Botanical Journal of the Linnean Society* (Linnean Society, London, U.K.); *Bothalia* (Botanical Research Institute, Pretoria, South Africa); *Bradleya* (British Cactus & Succulent Society); *Journal of East African Natural History* (East African Natural History Society & National Museum, Kenya); *Journal of Tropical Ecology* (Aberdeen University, U.K.); *Kew Bulletin* (Royal Botanic Gardens, Kew, U.K.); *South African Journal of Botany* (South African Association of Botanists, Pretoria, South Africa); *Archives of Natural History* (U.K.).

Scientific advisor for *Sansevieria*, the journal of the International Sansevieria Society.

### KU recognition

Outstanding Scholar of the Year Award, 2002.

VC's Extra Mile Award, 2007.

Pioneer Professor award, 25<sup>th</sup> Anniversary Celebrations, 2010.

Appointment as Professor Emeritus, 2013.

### International recognition

Awarded R.A. Dyer Gold Medal, South Africa, 1996.

Awarded Cactus d'Or (Golden Cactus), Municipality of Monaco, 2008.

Elected President of the International Organisation for Succulent Plant Study (IOS), 2006.

Fellow of the Cactus and Succulent Society of America, 1995.

Elected Vice-President, National Cactus & Succulent Society, UK, 1975.

Elected Vice-President of the Succulent Society of Zimbabwe, 1990.

Admitted as Fellow of the Burgon Society (after submission of research dissertation), 2011.

Both editions of Dr. H. Jacobsen's *Lexicon of Succulent Plants* (1974, 1977), a leading reference work on succulent plants, dedicated to me.

Volume 8 of *The Euphorbia Journal* (1992) dedicated to me.

Six new plant species named in my honour by other botanists: *Aloe newtonii* Castillon (2009), *Angolluma lenewtonii* Lavranos (1998); *Cynanchum lenewtonii* Liede (1994); *Euphorbia lenewtonii* Carter (2000); *Huernia lenewtonii* Plowes (1995); *Sansevieria newtoniana* Forrest (2014). Another species, *Euphorbia amicorum* Carter (2001), named in joint commemoration of another botanist and me (Latin *amicus* = friend; *-orum*, plural) because we collected the original material together.



On Baio Mountain, Marsabit District