Active/Passive Science Voice Exercise

1950s

Provided Citation
Studies on the Vegetation of Shetland: II. Reasons for the Restriction of the Exclusive Pioneers to Serpentine Debris
D. H. N. Spence
Journal of Ecology
Vol. 47, No. 3 (Oct., 1959), pp. 641-649

CBE Citation
Spence, D.H.N., 1959. Studies on the Vegetation of Shetland: II. Reasons for the Restriction of the Exclusive Pioneers to Serpentine Debris, *Journal of Ecology* 47(3), pp. 641-649.

Active

Provided Citation
Limnology of Selected Arctic Lakes in Relation to Water Supply Problems
William L. Boyd
Ecology
Vol. 40, No. 1 (Jan., 1959), pp. 49-54

CBE Citation
Boyd, W.L., 1959. Limnology of Selected Arctic Lakes in Relation to Water Supply Problems, *Ecology* 40(1), pp. 49-54.

Active

1960s

Provided Citation
Vegetation and Environmental Patterns in the Crested Butte Area, Gunnison County, Colorado
Jean H. Langenheim
Ecological Monographs
Vol. 32, No. 3 (Summer, 1962), pp. 249-285

CBE Citation
Langenheim, J.H., 1962. Vegetation and Environmental Patterns in the Crested Butte Area, Gunnison County, Colorado, *Ecological Monographs* 32(3), pp. 249-285.

Mixed

Provided Citation
The Effect of Pupal Predators on a Population of Winter Moth, Operophtera brumata (L.) (Hydriomenidae)
J. H. Frank
Journal of Animal Ecology
Vol. 36, No. 3 (Oct., 1967), pp. 611-621

CBE Citation
Frank, J.H., 1967. The Effect of Pupal Predators on a Population of Winter Moth, Operophtera brumata (L.) (Hydriomenidae), *Journal of Animal Ecology* 36(3), pp. 611-621.

Passive

1970s

Provided Citation
The Demography of a Sand Dune Annual: Vulpia Fasciculata: II. The Dynamics of Seed Populations
A. R. Watkinson
Journal of Ecology
Vol. 66, No. 1 (Mar., 1978), pp. 35-44

CBE Citation
Watkinson, A.R., 1978. The Demography of a Sand Dune Annual: Vulpia Fasciculata: II. The Dynamics of Seed Populations, *Journal of Ecology* 66(1), pp. 35-44.

Active

Provided Citation
Mineral Cycling: Some Basic Concepts and Their Application in a Tropical Rain Forest
Carl F. Jordan and Jerry R. Kline
Annual Review of Ecology and Systematics
Vol. 3, (1972), pp. 33-50

CBE Citation
Jordan, C.F. & Kline, J.R., 1972. Mineral Cycling: Some Basic Concepts and Their Application in a Tropical Rain Forest, *Annual Review of Ecology and Systematics* 3, pp. 33-50.

Active

1980s

Provided Citation
The Development and Field Test of a Tactical Model of the Planktivorous Feeding of White Crappie (Pomoxis Annularis)
David I. Wright and W. John O'Brien
Ecological Monographs
Vol. 54, No. 1 (Mar., 1984), pp. 65-98

CBE Citation
Wright, D.I. & O'Brien, W.J., 1984. The Development and Field Test of a Tactical Model of the Planktivorous Feeding of White Crappie (Pomoxis Annularis), *Ecological Monographs* 54(1), pp. 65-98.

Active

Provided Citation
Regulation of Seed Yield Within and Among Populations of Prunella Vulgaris
Alice A. Winn and Patricia A. Werner
Ecology
Vol. 68, No. 5 (Oct., 1987), pp. 1224-1233

CBE Citation
Winn, A.A. & Werner, P.A., 1987. Regulation of Seed Yield Within and Among Populations of Prunella Vulgaris, *Ecology* 68(5), pp. 1224-1233.

Passive

1990s

Provided Citation
Selection for the Timing of Great Tit Breeding in Relation to Caterpillar Growth and Temperature
A.J. Van Noordwijk, R.H. McCleery and C.M. Perrins
Journal of Animal Ecology
Vol. 64, No. 4 (Jul., 1995), pp. 451-458

CBE Citation
Van Noordwijk, A.J. & McCleery, R.H. & Perrins, C.M., 1995. Selection for the Timing of Great Tit Breeding in Relation to Caterpillar Growth and Temperature, *Journal of Animal Ecology* 64(4), pp. 451-458.

Active

Provided Citation
Migration of Herbaceous Plant Species across Ancient-Recent Forest Ecotones in Central Belgium
Beatrijs Bossuyt, Martin Hermy and Jozef Deckers
Journal of Ecology
Vol. 87, No. 4 (Aug., 1999), pp. 628-638

CBE Citation
Bossuyt, B. & Hermy, M. & Deckers, J., 1999. Migration of Herbaceous Plant Species across Ancient-Recent Forest Ecotones in Central Belgium, *Journal of Ecology* 87(4), pp.628-638.

Passive

Converted Paragraphs

Winn, A.A. & Werner, P.A., 1987. Regulation of Seed Yield Within and Among Populations of Prunella Vulgaris, *Ecology* 68(5), pp. 1224-1233.

Original (Passive):

Seed production is an important component of plant fitness. The total mass of seeds (seed yield) produced by a plant is determined by the product of several components; e.g., the number of fruits, the number of seeds per fruit, and the biomass per seed. Each of these components of seed yield is subject to genetic and environmental influences that will directly affect seed production and therefore fitness. Knowledge of how seed production is related to variation in components of yield and interactions among them will provide insight into what determines fitness in natural populations.

To understand how seed production is regulated in natural populations, we need to examine patterns of variation in components of seed yield and how these components interact to determine total yield. In general, yield components that are more variable will contribute more to differences among individuals in total yield. However, trade-offs between components of yield may tend to buffer total yield (Primack and Antonovics 1981, Pritts and Hancock 1984, 1985, Marshall et al. 1985). For example, increasing fruit number may lead to a decrease in the number of seeds per fruit. In this case, variation in fruit number may not lead to variation in total yield. Thus patterns of variation in yield components and the relationships between components must both be examined to determine how total yield is regulated.

Converted (Active):

Seed production is an important component of plant fitness. A plant's total seed mass (or seed yield) depends upon several components, such as the number of fruits, the number of seeds per fruit, and

the biomass per seed. Each of these components of seed yield is impacted by genetic and environmental influences that directly affect seed production and therefore fitness. Knowledge of how a plant's seed production is related to variations in these components of yield and the interactions among them provides insight into what determines fitness in natural populations.

To understand how seed production is regulated in natural plant populations, we need to examine patterns of variation in components of seed yield and how these components interact to determine total yield. In general, variations occurring in yield components contribute more to the differences among individuals in total yield. However, trade-offs between these components tends to buffer total yield (Primack and Antonovics 1981, Pritts and Hancock 1984, 1985, Marshall et al. 1985). For example, increasing fruit number potentially leads to a decrease in the number of seeds per fruit. In this case, variation in fruit number may not lead to variation in total yield. Thus patterns of variation in yield components and the relationships between components contribute to the regulation of total yield.