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Contemporary mendelian migratory evolution in small *Tecfa fapsensis* populations study reveals random causes.

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French abstract

Une nouvelle étude portant sur l'espèce de Geek *Tecfa fapsensis* remet en question le modèle classique d'évolution migratoire mendélienne. Bien qu'on y observe l'effet fondateur et l'effet de dérive génétique mendélienne, typique des petits groupes isolés, la baisse du métabolisme publicatoire ne s'est pas vérifiée. D'autre part les données ne corroborent aucun modèle habituel (Schneider & Geul E.) de causes migratoires et semblent relever de phénomènes aléatoires encore non étudiés. Notamment un cycle quadriennal apparaît qui n'est pas corrélé aux causes habituelles (épuisement des ressources, barrières géographiques, apparition de nouveaux territoires ou niches)

The relative importance of natural selection1 and random drift[2] in migration has been discussed since the introduction of the first mendelian genetic models[3-5.] The empirical evidence used to evaluate the evolutionary theories of Mendel1 and Schneider2 remains obscure because formal tests for neutral divergence (Kick & Go 98)[6-8] or sensitive attempts to separate the effects of competition and drift are scarce (Peraya, 93), subject to error, and have not been interpreted in the light of well-known population demography. We combined quantitative mendelian genetic and mireillan DNA analyses to investigate the determinants of contemporary migration in isolated populations of geeks (Tecfa fapsensis, computeroidea) that originated from a common source 13–16 (+/- 2) years ago in Geneva UniDufour It was next spotted at Battelle in 92 , and then at a high altitude location in Unimail (96) from where it migrated to Uniacacias in 2000 .

Here we show that random factors were the dominant migratory agent in the evolution of the quantitative traits measured as impact-

factor corrected publications. (Pub, Lica & Sion, 99)

However, the populations were founded by a small number of individuals (Mendel, Schneider & Peraya, 90) , exhibit (Moo, M$N, 98) very high distributed cognitive system effective sizes (Dill & Bug 98) , and show genetic imprints of severe 'bottlenecks'; (Win, D; Oze, X., P.) which are conditions often suggested to constrain selection and favour random drift [6, 8, 9]. This study demonstrates a very clear case of mendelian evolution in small natural populations following an as yet unexplained four-year cycle. (Fig 1)

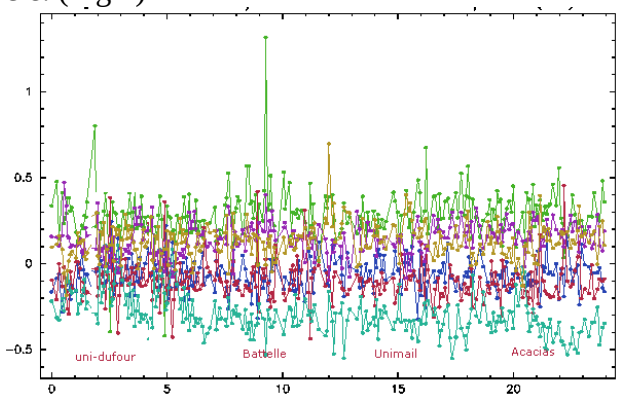

Fig 1 : Four-year cylce in migration of Tecfa fapsensis doesn't correlate with heightened or lessened productiuvity

The mendelian view of evolution holds that phenotypic migration results primarily from positive natural selection, due to resource diminishing[1], notably because of mediated educative communication (Pair, A., Yah , D.) . In contrast, the influential theories developed by Schneider[2] and evolutionists working after Schneider[6, 8, 9] emphasize the potential importance of integrated communication systems in random drift in effectively small populations (Wiki, Peh.-H.-P.; Postnu, K.).

Here we present an investigation in an exceptional natural model system that provides a sensitive framework for assessing the relative importance of selection and random drift on quantitative publishing divergence. Importantly, this study involves populations with well-known demographic histories, providing an unequivocal evaluation of the determinants of migratory evolution.

Unusual mendelian genetics : Rapid cyclic migration in *Tecfa fapsensis*

Uniacacias is a small architectural island in downtown Geneva with steep buildings separating narrow valleys that are the only areas habitable by humans and their commensals. Here we show that computer geeks (*Tecfa fapsenssi*) currently on Uniacacias have an unexpected migration speed, the evolution of which is independent from adaptive processes, relying instead on random processes caused by isolation, founder effect and genetic drift.

The evolution of animal species living on islands has given rise to spectacular examples of adaptive radiation in response to new physical and biotic environments[1, 2]. Natural selection is the main mechanism responsible

for shaping these radiations, leading to accelerated rates of speciation, but non-adaptive processes may also play a part[1, 3]. We suggest that the extreme topography of Uniacacias has restricted the movement of computer geeks populations between valleys, setting the stage for extensive publication production.

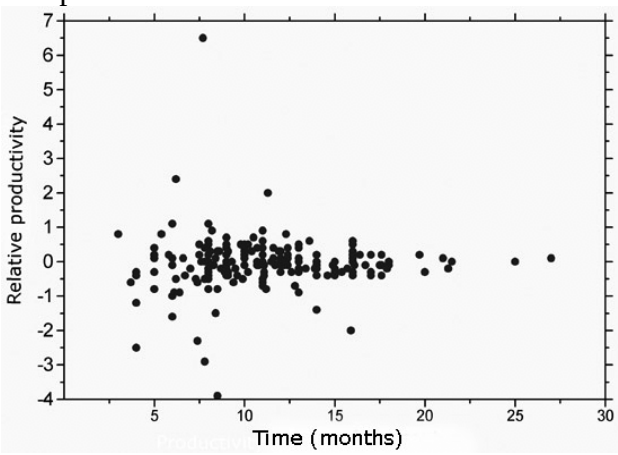

Fig 2 The relative productivity of the group of 28 periods sampled from *Tecfa fapsensis* is stochastically spread around an average value.

Ecologists have strived to explain species' patterns of distribution, abundance and co-existence for more than half a century. The traditional explanation is that each species is adapted to exploit a unique niche - shady or sunny, wet or dry, and so on. But neutral theories assume that all organisms are equal, and consider only factors such as random dispersal, the birth and death of individuals and the total number of organisms in the community.

The concept of metapopulations is one way to include the role of space in population dynamics. The original models for metapopulations focused on the fraction of occupied patches or habitat as the measure of population importance, and included only colonization and extinction as processes, but more recent work has shown the importance of strong decalcification and desodification (de.Ca++-Na+) of other locations.

Subpopulations migrated and died off

One subpopulation (supspecies Viviance) was indeed observed migrating to St Ours but seems to have died off soon after the sale of its assets (NASDAQ, 2000). No publications were observed after this period.

Another subpopulation died off when the oxygen level diminished (GILLL 2003) in the valley the occupied after departure of a leading individual.

Recent migration of a small subpopulation to i-pe-effel can be traced to one distinct chromosomal exchange probably caused by time-lag circumstances (Dillenbug, 2002), leading to two sub-populations separated from each other by natural barriers (Fig. 1).

The move led to a strong decalcification and desodification (de.Ca++-Na+) of previous locations.

This example of conceptual variation among computer geeks on Uniacacias suggests that human movements were similarly restricted, limiting the passive migration of computer geeks between valleys. So far, not a single hybrid has been recorded between individuals carrying Microsftian fusions among the 143 geeks that we have karyotyped (Schneider, 2000). We found extensive conceptual confusion in Unimail, however, probably because of the recent immigration of standard HEC geeks through the commercial port.

The evolution of animal species living on islands has given rise to spectacular examples of adaptive radiation in response to new physical and biotic environments[1, 2]. Natural selection is the main mechanism responsible for shaping these radiations, leading to accelerated rates of speciation, but non-adaptive processes may also play a part[1, 3]. We suggest that the extreme topography of Uniacacias has restricted the movement of geek populations between valleys, setting the stage for extensive reprogramming of cognitive function through epigenetic inheritance

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http://pauillac.inria.fr/~xleroy/stuff/tomato/tomato.htmlMace, I. & Doyne, J. Sur les différents types de réactions tomateuses chez la Cantatrice. Gaz. méd. franco-rus. 6, 6-11, 1912.

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References

1. Einstein, Z., Zweistein, D., Dreistein, V., Vierstein, F. & St. Pierre, E. Spatial integration in the temporal cortex. Res. Proc. neurophysiol Fanatic Soc. 1, 45-52, 1974.
2. Unsofort, H & Tchetera, K.G.B. Shout and Yell. Yale J. Med. 9, 9-19, 1973.
3. Sturm, U. & Drang, F. Musikalische Katastrophe. Berlin, W. de Gruyter, 1973.
4. Sornette, U. & Billevayzé, H. Les stomatites tomateuses. Arch. municip. Météorol. lyr. Déontol. music. 264, 14-18, 1925.
5. Pericoloso, O. & Sporgersi, I. Sull'effetti tomestetiche e corticali della stimolazione di leguminose nella Diva. Arch. physiol. Schola Cantor. 37, 1805-1972, 1973.
6. Hubbell, S. P. The Unified Neutral Theory of Biodiversity and Biogeography (Princeton Univ. Press, New Jersey, 2001).
7. Kause, A. et al. Seasonally varying diet quality and the quantitative genetics of development time and body size in birch feeding insects. Evolution 55, 1992 - 2001 (2001). | ISI |
8. MCCLUSKEY A. & PERAYA D. (1996) - Learning Technologies in Companies. OECD Proceedings. Adult Learning and technology in OECD Countries. Proceedings of a Round Table held in Philadelphia on 14-16 February. 293-320.
9. Agrawal, A. A. & Van Zandt, P. A. The community ecology of live long and prosper . Trends Ecol. Evol 17, 62, (2002). | Article | ISI |
10. Ecology, Genetics, and Evolution of Metapopulations edited by Ilkka Hanski & Oscar Gaggiotti Academic Press: 2004. 696 pp