MR790676 (87j:57014) 57R30
Ghys, Étienne (F-LILL)
Une variété qui n'est pas une feuille. (French) [A manifold that is not a leaf]
Topology **24** (1985), *no. 1,* 67–73.

The author gives a clever construction of a noncompact, connected n-manifold L, $n \geq 3$, that cannot be homeomorphic to a leaf in any compact, C^0-foliated $(n+1)$-manifold. In this construction, L has one end and, as this end is approached, a generator of p-torsion in $\pi_1(L)$ appears for each successive prime p. Roughly, the idea is to show that L, if a leaf, would be asymptotic to a leaf having intrinsically contradictory topology.

It should be remarked that a similar construction has been given by T. Inaba et al. [Kodai Math. J. **8** (1985), no. 1, 112–119; MR0776712 (86f:57024)]. They assumed C^2 smoothness, which makes the asymptotic behavior of L much easier to manage. Finally, if $n = 2$, the case left open in these papers, the exact opposite is true. All orientable surfaces can be leaves in suitable C^∞ foliations of all closed 3-manifolds and all nonorientable surfaces in all closed, nonorientable 3-manifolds [J. Cantwell and the reviewer, "Every surface is a leaf", Topology, to appear].

Reviewed by *Lawrence Conlon*