

**Testimony of Bruce Shields VFPA on Wed, Apr 13 to Senate Natural Resources Comm.
re: Forest Fragmentation Bill H.789 of 2016 Dr. 2.1**

Background of key words “Forest Fragmentation” and “Connectivity.”

The concept of Forest Fragmentation was popularized by Harvard entomologist Edwin O. Wilson. His doctoral research (1955) on ant populations on the Dry Tortugas in the Gulf of Mexico observed that larger islands had more species of ant than smaller ones. Prof. Wilson from that study has extrapolated very expansive biological, ethical and political conclusions.¹ He hypothesized that the diversity of species everywhere is inherently governed by the “island effect,” that species diversity degrades when populations are confined to small areas. Based in part on Wilson’s thought, in the early 1990’s a proposal titled “The Wildlands Project” argued that for proper biological diversity, human activity must be excluded from “core areas” comprising at least 25% of the gross area of “landscape scale” regions². This is not arcane information: the requirement for a set-aside of a 25% core area generated huge controversy in the year 2000 regarding Vermont’s acquisition of the former Champion Lands.

The program proposed in H.789 of preventing Forest Fragmentation is designed to counteract the island effect in Vermont through zoning regulations. Specifically, this section of Vermont Statutes would proclaim that the policy of the State of Vermont is for large landowners to accumulate or maintain the largest possible forest parcels. That proposition violates several other principles well known in Vermont: namely, that wealth (including land ownership) should be as widely distributed as possible, and the observation that high levels of ad valorem taxation perform the economic function of forcing the division of large concentrations of property wealth. The implied proposition that Biological Diversity should be the paramount goal of all forest management in the State of Vermont is not a finite proposition, and therefore no one can assess whether the goal is being attained.

Specific Comments.

Page 1, line 12-13 [in P.4302 (C/L) Goals] mis-states Vermont’s historical development — “... *the historic settlement pattern of compact village and urban centers separated by rural countryside.*” A geographer describing the Yankee settlement of Vermont notes that for the first 100 years, settlement was widely dispersed because each person required a certain number of acres to survive³. Only in the past 100 years with the coming of the industrial revolution, railroads, and fossil fuels could compact settlements arise in transportation centers.. The desired settlement pattern for Vermont’s landscape is an industrial, not agrarian Vermont.

Page 3 line 14-15. New (C) inserted to read “*Vermont’s forestlands should be managed so as to preserve and improve forest blocks and habitat connectors.*” Those are objectives intelligible only as expressions of the Wildlands Project noted above.

Page 5, inserts three new Definitions, (34)“Forest Block,” (35)“Forest Fragmentation,” (36)“Habitat Connector”. These definitions appear to subordinate a

¹ Edward O Wilson, *The Future of Life*. Alfred Knopf, New York, 2002.

² Mann, Charles C.; Mark Plummer, “The high cost of biodiversity.” *Science*. 1993. HighBeam Research. (April 12, 2016). <https://www.highbeam.com/doc/1G1-14165802.html>

³ Harold Meeks, *Time And Change In Vermont* [Globe Pequot Press, 1986].

landowner's interest to some nebulous and arbitrarily determined goal of "connectivity" and "integrity." The social function of private ownership of property is to prevent disputes over the use and management of property: a person on his own land may exercise his own judgement without fear of retaliation or reprisal by other persons. But not one single element of those 3 definitions can easily be quantified, meaning that a landowner will depend on upon arbitrary opinions of a Zoning Review Board, and cannot predict in advance what may be termed "a smaller area of forestland that varies in size and isolation from other forestlands."

Page 7, line 4-8, Definition (36) Habitat Connector. Each species requires different conditions, and I can't conceive how any town plan can make a useful contribution. Is the connector for a tree's wind-blown pollen? Dispersal of lichens? Migration of tortoises? Will the plan for one species potentially impede the requirements for another species? Would connectivity for Moose work for Leopard Frogs? This proposal may match some group's political punch list, but has very poor potential for implementation.

Page 7, lines 7-11 inserts a new "(F) [repeated Page 9 (D)] into guidelines for Regional Plans, *"Indicating those areas that are forest blocks and habitat connectivity corridors and recommending specific policies to encourage active management of those areas for wildlife habitat and timber production, and to control development in those areas to prevent forest fragmentation and promote the health, viability, and ecological function of forests."* These are qualitative, not quantitative definitions ;which subordinate a landowner's plans and goals to a subjective judgement of an unelected board. Remember the Vermont Constitution, Article 2d, *"Whenever any person's property is taken for the use of the public, the owner ought to receive an equivalent in money."* The Vermont Land Trust recognizes that provision: they always arrange to pay a landowner when a Conservation Easement with language resembling the definitions above is placed on a property. This bill proposes simply to extinguish rights without compensation —and without prior notification.

Coordination. The freestanding bylaw requiring an utterly undefinable "forest integrity permit" is mercifully gone, though the study group proposed arguably could restore it. Because this bill is advancing simultaneously with other bills to make the AMP's mandatory, require occupational licensing of foresters, and modify the Endangered Species Act, landowners — both in farming and forestry — cannot even guess what requirements may be in place next year. How all the changes will work together, or how they may impact the Use Value Appraisal program is very uncertain. The Study Committee proposed in H.789 needs to have at least one actively working landowner — planners often seem dismissive of the intelligence and ethics of landowners.

Vermont has developed a love-hate relationship with our rural industries. Many units and initiatives within State government profess to love agriculture and forestry. But other elements are clearly appalled by the current state of our business, and are eager to impose very extensive and strict new regulation on rural life enterprises. I am uncertain how passage of H. 789 might impact the provisions of H.851, which I do support. Every forestry related business I know has suffered extensive and costly zoning or development review, with operations shrunken or made conditional. This bill appears substantially to conflict with H.851.