

Supplementary Table 1: Description of investigated areas

Treated areas	
Petersau	The horse farm with the House Martin colony is situated west of the Rhine River between kilometres 434 and 436 (entrance at WGS84: 49° 34' 19.75" N, 8° 24' 58.06" E), about 250 m away from the river. The farm is mainly surrounded by agriculturally used area. Breeding sites for house mosquitoes (e.g. <i>Culex pipiens</i> , LINNAEUS 1758) are available directly on the farm. The nearest breeding sites for floodplain mosquitoes (e.g. <i>A. vexans</i>) that have been treated with <i>B.t.i.</i> during 1991, the year when the investigation took place, are about 1.5 km away. Car trap samples were taken along 3 routes in the surroundings of the farm: Two of them are open, i.e. not shaded by trees (1 km and 0.8 km), and one is half-open (1 km).
Riedwiesen	The nature reserve Backofen-Riedwiesen (148 ha) is located east of the Rhine River at kilometre 412 (WGS84: 49° 24' 49.74" N, 8° 30' 24.11" E). It contains several semi-permanent waters, which serve as mosquito breeding places. Mosquito control with <i>B.t.i.</i> only takes place if there is a mass development of floodplain mosquitoes, which didn't happen during 1989-1991 when the study took place. The car trap route in this area (1.3 km) is partly open and partly shaded by trees growing on one side of the way.
Ketscher Rheininsel	This nature reserve (490 ha) is located east of the Rhine River between kilometres 405.6 and 409.3 (entrance at WGS84: 49° 22' 03.57" N, 8° 31' 17.14" E). It is a wooded island, situated between the current Rhine River and the back water. In this area floodplain mosquitoes were controlled with <i>B.t.i.</i> during the years 1989 and 1990 when the investigation took place. Two car trap routes were sampled: One leads through the forest in the centre of the island (1.7 km), and one runs at the eastern edge of the forest along the back water (1.6 km).
Rheinhausen	The investigated area is located east of the Rhine River at kilometre 393 (WGS84: 49° 16' 38.48" N, 8° 27' 35.40" E). It is not protected and it contains different mosquito breeding sites, which are treated with <i>B.t.i.</i> when floodplain mosquitoes come up. However, during 1989, the year when the investigation took place, these waters were almost dry. The car trap route (1.05 km) runs partly between the forest edge and the Rhine bank and partly underneath the trees, close to a ditch.
Maudacher Bruch	This landscape protection area (523 ha) is located about 7 km west of the Rhine River near kilometre 426 (WGS84: 49° 28' 00.22" N, 8° 21' 55.31" E). It is a wooded area, criss-crossed by a ditch system. In this area samples were only taken in September and October 1989. <i>B.t.i.</i> was used against early breeding mosquitoes in April and May 1989. The car trap route (2.5 km in total) runs along the south-western verge of the terrain. For sampling it was divided in several sub-stretches.

Untreated areas

- Biedensand** This nature reserve (530 ha) served as control area, which was excluded from mosquito control before and during the years 1990 and 1991, when the investigation took place. It is located east of the Rhine River between kilometres 438 and 440 (entrance at WGS84: 49° 35' 51.77" N, 8° 27' 04.44" E). The site includes various breeding sites for floodplain mosquitoes, particularly a large reed area. The car trap route (1 km) is situated in the meadow, but shaded by trees growing along the route.
- Schusterwoerther Altrhein** This area is part of the nature reserve Kuehkopf-Knoblochsaue (2370 ha). It served as control area, which was excluded from mosquito control before and during the year 1990, when the investigation took place. It is located east of the Rhine River at kilometre 477 (WGS84: 49° 50' 50.05" N, 8° 23' 27.65" E). The area includes various breeding sites for floodplain mosquitoes. The larger part of the car trap route (1 km in total) runs through open terrain, the smaller part along the border of a wood.