4.2. Preparation

Days start early in the field camp, with our alarms going off at around 6:20 a.m. Before someone starts the fire in the mornings, the rooms are chilly. I slip into my insulation clothes, which are on the floor next to my bed so that I can warm them up before completely leaving the bed. While my roommate Kate and I struggle to rise this early, Michael and Julian are usually already in the kitchen by now.

When I enter the kitchen, Michael, who usually gets up first, is busy with the bread we baked overnight in a breadmaker. In Arvidsjaur, a breadmaker receives more appreciation than a fast Internet connection or smartphone. However, this has changed since our fieldwork in 2021. These days, Michael tells me that people are 'glued to their phones' in the mornings, since WiFi access has improved in the field station. Once Michael has removed the bread, he starts preparing whatever else is necessary for the day (Figure 10). Most often, this is the equipment. Michael usually decides what must be done during fieldwork and thus has the best knowledge of the equipment required. I quickly check the thermometer that is installed next to the kitchen window to check how cold it is today. It indicates –17°C, a little milder than usual in the mornings.

Julian sits on a wooden chair and starts the fire (Figures 11, 12). Soon he will move over to the stove and make porridge for everyone. We all appreciate the hot food in the morning because it warms us and prepares us for the field day out in the cold. In one corner of the kitchen, a pile of fat is defrosting (Figure 13). Someone will cut it into smaller pieces, make two holes in the middle and thread a wire through it, so that the biologists can easily attach it to the trees in the territories. In this sense, the fat is part of the experimental system. This task, which no one is particularly fond of, is rotated among us; today, it is my turn.

After a few days of acclimatising to the field and the morning tasks, Kate makes coffee (Figure 14), while I set the table for breakfast, prepare the thermos flasks, and pack our lunch with fresh bread. I often do this while the biologists finalise the planning for the fieldwork. Their aim is to visit the roughly 70 registered bird territories in the three study areas at least twice during this season. During the first round, they mostly check on the birds and document their first observations. Later, they will make video recordings and, if it is planned for the season, conduct further experiments. They may also have to return to territories to ring new birds and register them; or, if the birds did not show up the previous time, they may go back to attempt to find them again.

The group decides who collects data in which bird territory that day by evaluating the most efficient routes and what must be done. For this task, they sit together at the kitchen table, studying the maps and discussing potential problems as well as the likelihood that birds will appear. The group also take their individual skills and experience with fieldwork in Arvidsjaur into account during the division of labour. In this way, they have a realistic plan with tasks that everyone can manage based on their abilities. It is easy to split the territories among the biologists on the first day when no data have been collected yet. In 2020, the planning was done in a similar manner: Michael, Marine, and Camille would discuss the plan for the day, often looking at a map that Michael had put up in the kitchen after a few days of fieldwork (Figure 15). For these planning discussions and considerations, the three biologists stand around the maps, while I sit on the kitchen table behind them and observe them. Michael points towards the territories, while Camille and Marine are standing next to each other with their field notebooks in their hands: listening, discussing, and taking notes. Camille and Marine occasionally confirm what he says by repeating the territory names, nodding their heads, or simply noting the names in their field notebooks.

Before setting off for fieldwork, the biologists collect, check, and pack their gear. Some days they take mist nets and a tacklebox to ring the birds and collect data on their size and weight. This usually happens only after a few field days, as at the beginning of a field season they first attempt to obtain an overview and focus on the presence of the birds. On these days, they carry their standard equipment, which consists of the field notebook containing the lists of the birds and maps of the territories (Figures 16–19), a pencil, binoculars, bait, and an old phone – often a Nokia smartphone (because their batteries last the longest) with a Swedish SIM card. On other days, this equipment is supplemented with a video camera, or, when it comes to conducting experiments, the biologists carry additional tools with them. Depending on the plan for the field day, the gear, material, and tools change, as do the morning preparations. As I need only my field notebook, pencil, camera, and smartphone, I help prepare or carry the biologists' equipment.

On the first evening in the field camp, Michael provided me with a field notebook, like the ones the biologists use, and a pair of binoculars. With Julian's guidance, I glued the three maps of the study areas at the front of the small A6 notebook. At the back, I glued in an Excel list (Figure 20) with all the birds that had been registered for the study which the biologists suspect are currently living in the territories. Gluing these maps and charts into the notebooks is something all the biologists do before they enter the field. Thus, they make sure that they do not lose their most important documents for fieldwork, as the combination of the maps and territory lists helps them know what to expect and which birds should be present. During fieldwork, I make less use of the notebook and check the maps only occasionally to see which territory we are in; however, without guiding myself and without a GPS, the maps alone are not much help, and I often have to ask

my interlocutors which territory we are in. Most often, I stick to the notebook in which I collect my ethnographic data.

Once we have finished breakfast and prepared our equipment, we store the backpacks containing the – now defrosted – fat, poles, and other tools in the field car. Our skis are attached to the roof, and the biologists and I get in, ready to set off (Figure 21). A quick glance at the clock through the driver's headrest reveals that it is no later than 7:30 a.m. and no warmer than about –19°C. The driver then obscures my vision of the clock.

Michael does not start driving without checking one last time that everyone has packed their notebooks and pencils, the biologists' most essential tools for fieldwork. However, the thermos flask is equally important and also forms part of the checklist. Once it is confirmed that nothing important has been left behind, Michael starts driving towards one of the three study areas that has been chosen for the day. On other days Julian drives. The drive takes between 20 and 40 minutes, depending on the site. Time is precious during fieldwork, as the return flights have been booked and the biologists usually have a tight schedule in which to complete many tasks. This urgency is particularly clear in Michael, who does everything quickly – including driving.

Three Study Areas

The field consists of three main geographical zones, study areas, or study sites, as the biologists call them, represented by the three maps in my notebook: *Managed, Reivo,* and *Fat Road*. In turn, the study areas contain several 'bird territories'. Each territory is inhabited by one group or 'family' of birds. The borders of the study areas are defined either by natural markers, such as hills and rivers, or by roads, such as in the territory *Managed,* a managed forest – from which its

name is derived – that is encircled by two roads. However, the borders change slightly depending on the evolution of the bird territories, as the birds apparently do not remain in human infrastructure. Therefore, there is an additional territory across the road from *Managed* to which the birds have migrated – something that occasionally occurs.

Reivo is a hilly, protected forest, situated alongside a valley. It is divided into two parts by a ridge that we must cross when collecting data. While the territories on the near side between where the car is usually parked and the ridge are within 30 minutes' skiing distance, the others, on the far side of the ridge, only start after about 30 minutes of skiing. Therefore, most territories in *Reivo* require a greater level of physical fitness and skiing ability. At the same time, it is also the most beautiful forest of the three, which, at least for me, is motivation and makes up for the effort required.

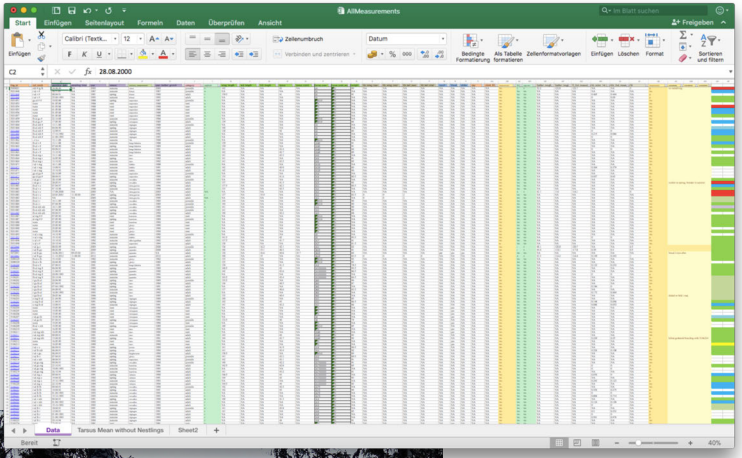
The *Fat Road* study area is located along a forest road. Working here may also involve a long skiing route, but the territories are easily accessible because they are all located alongside the road, which makes the skiing and wayfinding easier than when navigating through the forest. When the biologists first searched for birds in that region, they noticed that they had created a 'fat road' by putting up a piece of fat to attract the birds every kilometre, and thus they decided to call it *Fat Road*.

Each study area contains bird territories in which bird 'families' are located. Family – one of many anthropomorphic concepts that have been applied to these birds – means that the breeding couple, a male and female bird, usually has offspring every year. The offspring are called 'nestlings' and, once they have left the nest, 'kin juveniles'. As 'kin juveniles', the more dominant birds chase their submissive siblings away and retain the territory themselves. The remaining birds then stay together in a family network of three to four kin birds. The juveniles that have been 'kicked out' of their birth territories usually join other bird

families. Thus, some birds live as adopted 'non-kin' birds or unrelated 'immigrants' with these family groups, forming a 'patchwork family' of sorts. After a year or two, the 'kin offspring' leave their parents' territory to find a mate. Subsequently, they either form a new territory together, or, as the breeding couple usually remain together for life, they join an existing territory in case one of them dies.

As jays are territorial, the breeding couple do not change territory, nor does the rest of the group, until they become breeders themselves or are chased away. The birds mostly move within their territory, which spans approximately 800 m. This is where they hide their food in winter and build their nests in spring. More recently, the territories have been increasingly affected by deforestation and some bird territories have disappeared entirely.[12] I was particularly struck by the impact of this in the 2020 study, where, in comparison to my study five years prior, much of the forest had been felled and some territories we wanted to visit had disappeared (Figure 22). However, before we enter the field and can collect data, the biologists and I must receive situated enskillment.

12
Kate Layton-Matthews, Arpat Ozgul, and Michael Griesser, 'The Interacting Effects of Forestry and Climate Change on the Demography of a Group-Living Bird Population', *Oecologia* 186, no. 4 (2018): 907–18, https://doi.org/10.1007/s00442-018-4100-z.



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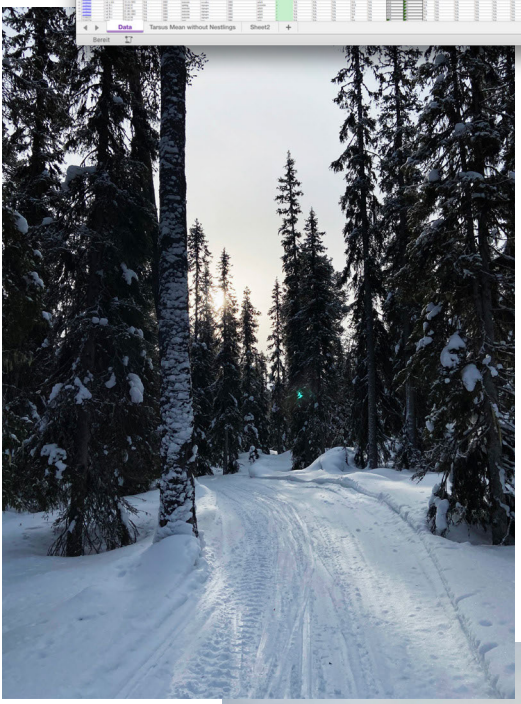

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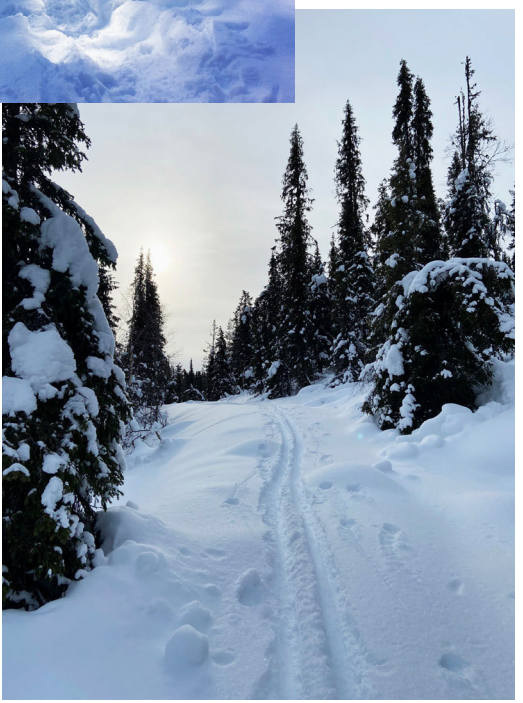

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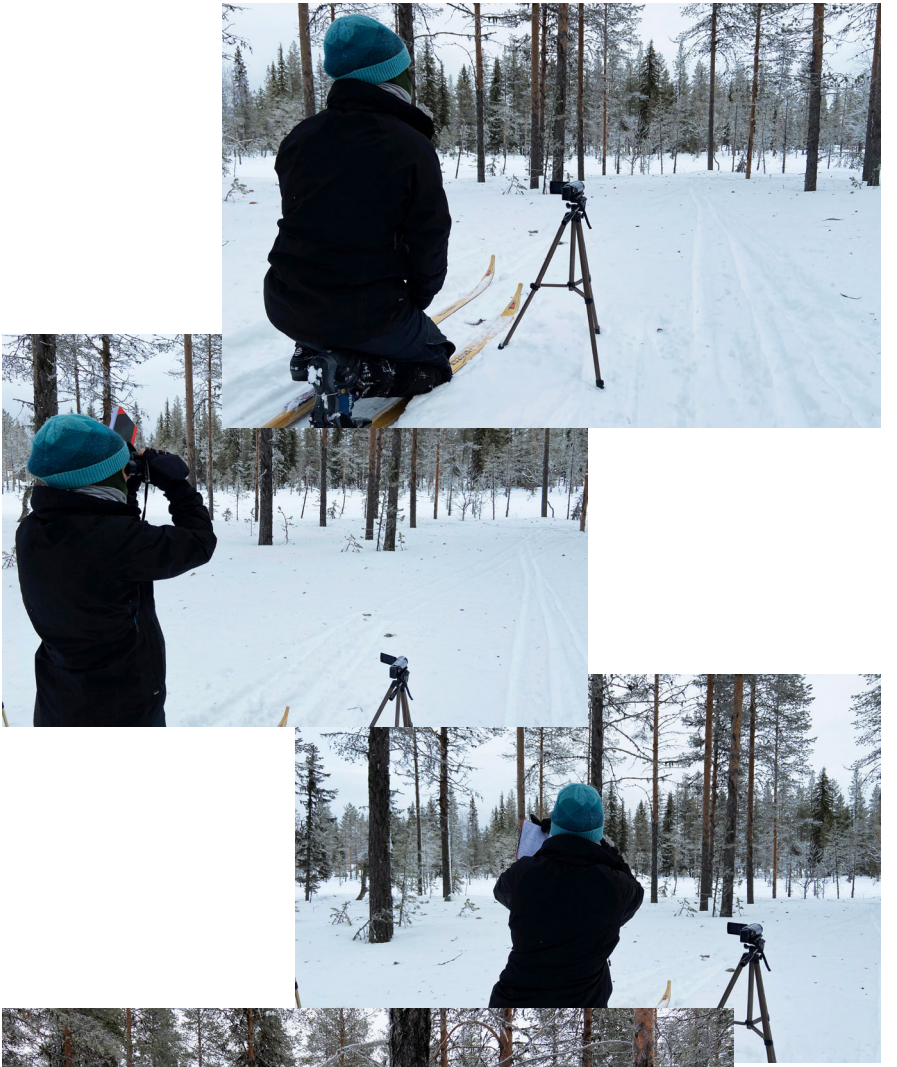

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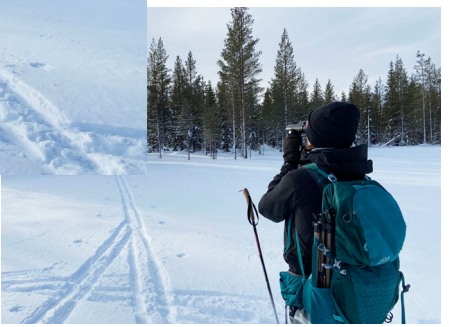

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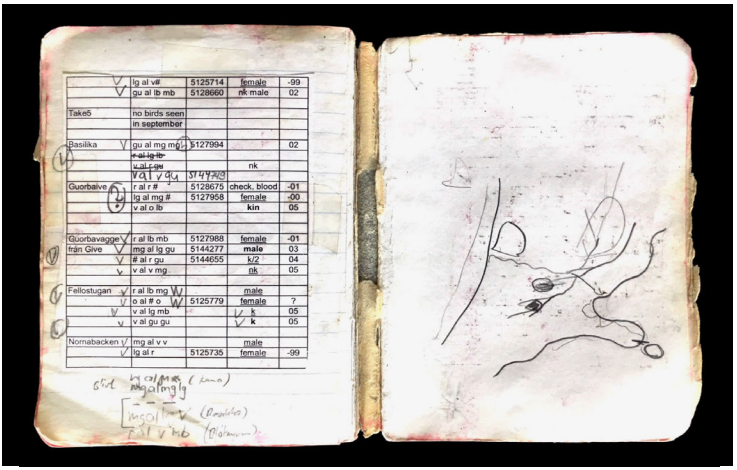
32 a, b



		lg al v#	5125714	female	-99
		gu al lb mb	5128660	nk male	02
Take5		no birds seen			
		in september			
Basilika		gu al mg m	5127994		02
		~~v al lg lb~~			
		~~v al r gu~~		nk	
Guorbaive		r al r #	5128675	check, blood	-01
		lg al mg #	5127958	female	-00
		v al o lb		kin	05
Guorbavagge		r al lb mb	5127988	female	-01
från Give		mg al lg gu	5144277	male	03
		# al r gu	5144655	k/2	04
		v al v mg		nk	05
Fellostugan		r al lb mg		male	
		o al # o	5125779	female	?
		v al lg mb		k	05
		v al gu gu		k	05
Nomabacken		mg al v v		male	
		lg al r	5125735	female	-99

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34 a, b, c

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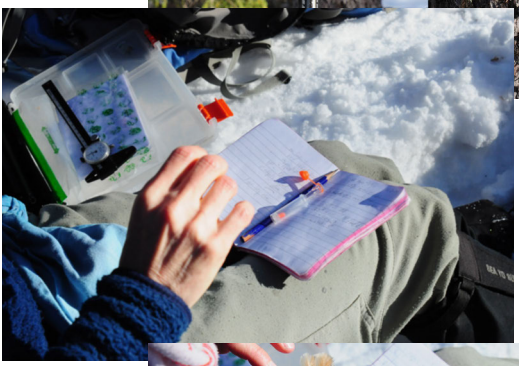

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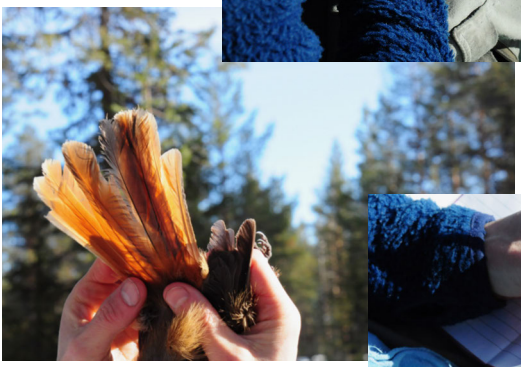
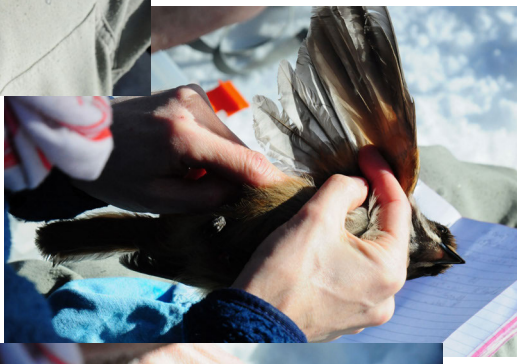
36 b

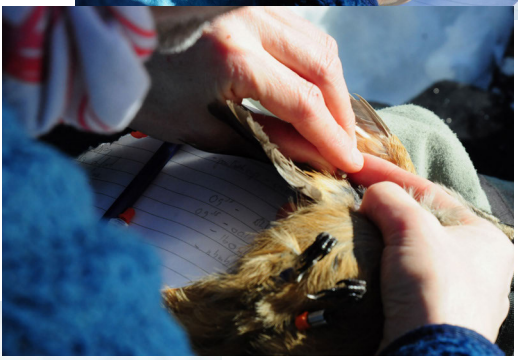


36 c

36 d

36 e





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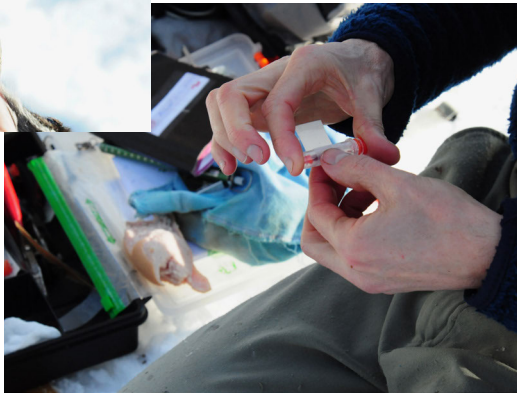

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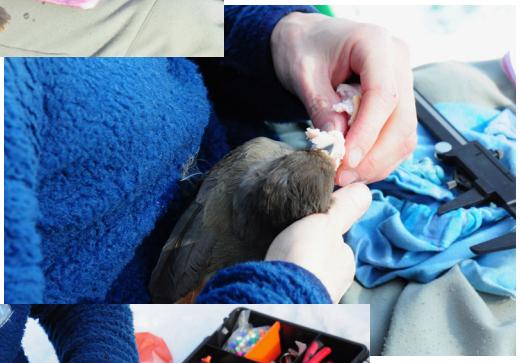

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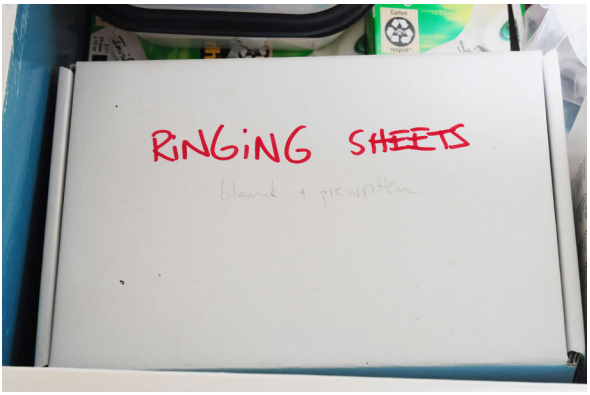

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38 a, b, c

38 d, e

Figure 23:
Screenshot of an Excel sheet of the main database containing all measurements (obscured to avoid theft of data). Zurich, 2017.

Figure 24 a–e:
Tracks made by Kate and me. Arvidsjaur, 2015.

Figure 25 a–c:
Sequence of Michael on cross country skis, putting up a feeder on a tree. Arvidsjaur, 2015.

Figure 26:
Feeder impaled on a branch with lichen. Arvidsjaur, 2015.

Figure 27:
Camille holding the GPS set up to go to territory *Trollhunter* 2019, usually called *Troll*. Arvidsjaur, 2020.

Figure 28 a–d:
Sequence of Marine during her first video recording of a behavioural observation, feeder attached to a tree in the back, currently with one bird around. Arvidsjaur, 2020.

Figure 29 a–e:
Sequence of Camille crossing an open field, looking for Siberian jays in a territory affected by deforestation. Arvidsjaur, 2020.

Figure 30:
At the end of a field day in *Reivo,* I try to capture the atmosphere from where the car is parked. An empty house to the left and a farm in the background. Arvidsjaur, 2015.

Figure 31:
Video camera '1' covered with snowflakes and installed in *Maderängen,* recording the interactions of the Siberian jays. (A photograph Michael asked me to take to document the snowflakes.) Arvidsjaur, 2020.

Figure 32 a, b:
(a) Marine, Camille, and Michael planning their field day in *Reivo,* taking notes and discussing the best clusters of territories to visit. Arvidsjaur, 2020. (b) Michael giving Camille more detailed descriptions for her route, showing her the territory location on GPS. Arvidsjaur, 2020.

Figure 33:
Double page of a field notebook, showing the Excel chart with the Siberian jays glued into the field notebook and a hand-drawn map to document a geographical situation during fieldwork. Zurich, 2018.

Figure 34 a–c:
Sequence of a bird flying into a net installed between the trees. Michael in the background. Arvidsjaur, 2015.

Figure 35:
Blue cotton bag holding a bird that has just been caught. Arvidsjaur, 2015.

Figure 36 a–q:
Sequence of taking bodily measurements from a bird. Arvidsjaur, 2015: (a) Michael is about to take out the bird from the blue cotton bag lying on his lap. The field notebook, a pipette for the blood sample, a calliper to take the bodily measurements, and a box with the coloured rings are prepared next to him. (b) He is about to pick a tail feather of the (ringed) bird. (c) Together with this, he checks the tail (and wing) feathers to count the so-called 'hunger bands' that indicate the fitness of the bird. (d) Now Michael notes down the colour ID of the bird into his notebook, (e) holding the bird ready to measure it. (f) Next, he opens the right wing of the bird to take a blood sample by (g) puncturing the bird's brachial vein with a sterile syringe needle to collect a few drops of blood. (h) Eventually, he stores the blood taken from the bird. (i) Holding the bird in his right hand, he takes further notes with his left, (j) documenting the measurements of the bird. (k) Next, he measures the bill length, (l) tail length, and (m) tarsus length with a calliper. (n) The last measurement is the bird's weight with a scale. (o) Michael notes down all the results. (p) At the end of collecting data, the bird gets rewarded with its 'favourite dish', sausage, before it is released. (q) Before continuing with fieldwork, Michael attaches the tail feathers he removed into his field notebook with tape, next to his notes on the bodily data about the Siberian jays.

Figure 37:
Box with blank and pre-written 'ringing sheets' as they are stored in the field house. The biologists usually take a few sheets from this box into the field to register new Siberian jays. Arvidsjaur, 2015.

Figure 38 a–e:
Sequence of processing the raw data collected in the field. Arvidsjaur, 2015. (a) Michael handling the day's blood samples taken by Julian, Kate, and himself, on the kitchen table. A field notebook in the background and cutting board to prepare dinner. (b) Michael labelling the blood samples by noting the birds' IDs on tape with pencil and sticking them onto the samples to make sure to keep the overview, not mix them up, and maintain consistent data. (c) Other field material is lying on the table. (d) They stick the tail feathers they have brought back from fieldwork into a notebook and mark them with the relevant bird IDs. (e) Finally, the blood samples from the Siberian jays are stored in a tin can on the freezer shelf of the fridge.