

WORKPACKAGE 3 – INTELLIGENCE AND ADAPTATION

DELIVERABLE 16 – FIELD REPORT FOR PARIS, SUMMER

CONTEXT

GENERAL CONTEXT

Solutions for cohabitation between species, especially between humans and other animals, are not easy to generalize successfully. A lot of factors must be taken into account, from ethological point of view, from anthropological point of view but also from semiotic point of view. One of the least taken into account aspect is probably the animals' agency.

We know that animals of the same species don't communicate, behave or interact in the same way in different places (McGowan 2001; Freeberg 2012), sometimes even leading to geographical cultural norms (Whiten, Horner, de Waal 2005). Again, the particularly complex cognitive abilities of corvids (Fleming 2010) make them very interesting subjects for case-study about animal's agency.

INSIDE THE PROJECT

As the project aims to propose semiotic solutions for cohabitation that could be generalized, different aspects have to be taken into account, and this case study aims to address the question of animal agency. By studying the behaviour, habits, geographical and cultural norms of corvids, this step aims to map more precisely the way corvids adapt, understand and create semiosis in their environment, in order to understand on which points a generalization of solutions would have to focus.

RESEARCH QUESTION AND HYPOTHESIS

QUESTION AND SUBQUESTION

This deliverable is part of the Case study 3, aiming to study the relationship between the agency of some liminal species, like corvids, and the generalization of semiotic solutions for a better cohabitation of species in cities. The main question of this Case study is: How can we generalize semiotic solutions for human/animal cohabitation in different environments/cities?

This field report is a part of a field work distributed during all the length of the project. This field work aims more precisely to answer the question: What elements of behaviour should be acknowledged when trying to generalize a semiotic solution?

HYPOTHESIS OF THIS STEP

The general hypothesis of this Case study is that some species are particularly well-adapted to human contact, and their behaviour can be different depending on behaviour and culture of humans they live with. Their adaptability and intelligence must be taken into account when exporting urbanism solutions to another country, culture or climate.

The hypothesis of this collection of steps (from Deliverable 12 to Deliverable 19) is that some particular behaviours, having an influence on human beings, pets or infrastructures, must be taken into account to

generalize solutions for cohabitation. But these behaviours can change during time of the year and city of living. Pointing out these changes is important to understand how to create generalizable solutions, but also how to take into account animal's agency.

METHODOLOGY

METHODOLOGICAL CHOICES

Spots were chosen based on previous experience of crow video observations and recordings, especially ones made for the short film *Des corneilles et des Hommes* (Champiat et Delahaye 2019). The first one is the Champs de Mars garden, the second is the botanical garden of the Muséum National d'Histoire Naturelle (MNHN).

For summer season, a short observation period was set up (from 13rd July to 16th July), as the journey in France was shorter than intended. All observations are gathered in a Field Diary (see Figure 1 for a sample of Field Diary). Field Diary is part of the section Previous documents attached. For each observation, was noted:

- Number of the entry, in order to spot any missing entry in case of format change
- Date (in YYYY/MM/DD format for a better archive management) and time (as precisely as possible)
- Weather (for influence on specimens but also on pictures) and temperature (as precisely as possible)
- Place (in the localisation is not a specific address, all information useful to find the localisation were noted)
- Number of specimens (or at least an estimation, in case of a big flock or if they are in movement making difficult to count them)
- Any useful observation: behaviour, attitude, other species present, signs of stress or calm, presence of humans etc.
- If pictures or videos could be taken, the number of the picture or rush where the observation can be seen (see Figures 2, 3 and 4 for examples of interesting observations caught in tape)

All the photo and video were copied on an external hard drive and named in way that could allow anyone to easily find the material needed (see Table 1 for the nomenclature). All these files are stored without any cosmetic treatment, cut in the tape or modification, according to the Data Management Plan, validated by the grants' office.

ISSUES AND PROBLEM SOLVING

Observations were intended to be in the beginning of July, and an entire week-long, during a personal trip in France. Due to the attendance at the Gatherings in Biosemiotics (see Document C1), the trip took place in mid-July, with observations complicated and disturbed by the preparations and festivities of French National Day (14th July). The observation time was consequently shortened. No satisfying solution was found.

On the second spot, the entire flock is still missing and no explanation was found for the moment. The unique pair remaining in the garden was spotted again, presumably with a youngling, indicating a good health and a, at least partially, successful nesting season.

POINTS OF VIGILANCE

As observation period was shortened, observations can be fragile.

No satisfactory explanation could be found for the disappearing of the Champs de Mars entire flock (except the one remaining pair). More observations did not allow to understand what is happening there. Contact with local professional will be necessary to gather more information.

RESULTS

RAW RESULTS

In the Champ de Mars, the major change in population observed in winter – the disappearance of the entire flock except one pair – is still present. The remaining pair was observed, still healthy, with what appeared to be a youngling – due to the call for feeding behaviour – indicating a normal breeding behaviour and a, at least partially, successful nesting season.

The foraging behaviour was not observed, but the pair was avoiding the ground, probably due to the massive affluence of tourists, militaries and inhabitants, usual at this period of the year – the few days just before the National Day in France. Despite this major change in environment, with temporary infrastructures, stationary police units and unusual sounds, the pair appeared quite stress-free in its behaviour.

In the MNHN, the flock seems healthy, bold and well-fed. Multiple interactions crow-human have been observed. The recording was partial, due to the important affluence in the botanical garden, and the willing to avoid filming faces of people. Most of the crows were marked, it is probable that the most of the non-marked ones are younglings of this year.

Informal interviews with gardeners and reception's employee bright to light some aggressive behaviour from the crows toward humans or other birds living in the same area – mostly pigeons. These employees get me in touch with Frédéric Jiguet (National Museum of Natural History), the head of the crows' monitoring program, in order to gather more explanation and details about this aspect of their behaviour.

INTERPRETATION

There is still no sign of the flock in the Champ de Mars, but the remaining pair is having a normal behaviour, and fertile nesting season, with no major signs of stress. A traumatic or violent cause for the disappearance of the rest of the flock seems unprobeable.

The behaviour in the MNHN seems a good sample of the usual behaviour of crows in Paris, especially regarding the close proximity the birds have with humans.

On a curious way, aggressive behaviour from the crows does not seem to trigger aggressive response from humans, and is not even really badly perceived. A gardener explained that, one day, they – him and other gardeners – found a crow that was in a bush, and really aggressively behaving. They thought “she” was injured, so they caught her and bring her to the veterinarian unit in the Menagerie. But she was perfectly fine, “she just was just very bad-tempered. A ringworm [popular expression in French to describe someone nasty, aggressive and even vicious]. We called her Cindy and then released her.” It is interesting to note that giving a name is usually a sign of proximity and affection, and it could be strange to do so about an animal perceived negatively, especially by professional who have to work around it every day. But in this situation, the bad-temper of the animal appears to be:

- An exception rather than the norm: aggressive behaviour is rare, and seems to be perceived as a matter of “personality”, with some individuals being less sympathetic than others.
- A matter addressed: crows spotted with aggressive behaviour are trapped and isolated, in order to understand what triggered it (this is facilitated by the marking ring system). Employees and gardeners do not have the feeling that nobody cares about the issue when it appears, and that could be a pacification element.
- Not especially toward humans: another employee testified that she saw three crows attacking a perfectly healthy pigeon and killed it in order to eat it, without any shortage of food related at this time.

MILESTONE 1 – PROGRESS REPORT

IMPACT OF RESULTS

These results are helpful to create a continuity with the winter's observations. Some aspects, like the disappearance of the flock of the Champ de Mars, are confirmed by these observations. More data were gathered, especially regarding the frequency and nature of potential aggressive behaviour. These results should be consolidated by future observations in autumn and spring, especially with participation to marking operations (see Academic aspects in the General project section).

ISSUES, PROBLEMS OR LACKING

Observations were shorter than intended due to the particular state of Paris around the date of the National Day, interpretations should be careful and cautious.

The flock in the Champ de Mars did not reappear, but it does not seem to be a good idea to find another spot, as we still don't know the reason that made the crows leave, and the same should be happening in any other replacement spot.

NEXT STEPS

Next step of field observations should be in Tartu, in August 2022.

GENERAL PROJECT – CURRENT STATE OF PLAY

IMPACT OF RESULTS

These results are not yet fully relevant, but the observations made show more and more that a cross-observation between country could indeed be helpful to see behavioural patterns. With the particular monitoring through marking in the MNHN, some solutions for aggressive behaviours management could also be studied in a comparative way.

PROPOSITIONS FOR OTHER ASPECTS OF THE PROJECT

ACADEMIC ASPECTS

A potential partnership with the MNHN or one of its team might be possible, as Frédéric Jiguet invite me to come back in October, to attend to the marking session of the crows.

POPULARIZATION ASPECTS

During the observations some particular cases (like the one in Figure 3) occurred. If it is difficult to see how to exploit them scientifically yet, they are making good narratives, that could be used in communication or dissemination aspects, especially through video (as it is expected in step COM3).

NEXT STEPS

The visual material will be added to the blog. Video material will be prepared for a potential popularization video/short movie.

ANNEXES

REFERENCES

- Champiat, Clément, et Pauline Delahaye. 2019. *Des Corneilles et des Hommes*. Association Science Télévision. <https://vimeo.com/366803347>.
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Frédéric Jiguet for his quick reply and his invitation.

DOCUMENTS

PREVIOUS DOCUMENTS ATTACHED

Field diary (PDF version – 30/07/2022)

Data Management Plan (PDF version – 18/01/2021)

TABLES AND FIGURES

Nomenclature of the files				
Field observations format: CITY_SEASON_DATE_NATUREnumber				
City of observation	Season of observation	Date of observation	Nature of file	Number
P: Paris T: Tartu	A: Autumn SM: Summer SP: Spring W: Winter	Format YYYYMMDD	P: Picture R: Video rush	From 01 to 99, restarted in each folder

Table 1 - Nomenclature of the files for field observations

(see videos R03 and R04). A pair was also spotted on the way to the botanical garden, in front of Pikk bus station (see picture P01).

Special note: The employees of Botanical Garden did not know who was in charge to put the warning signs, and therefore who was monitoring the crows, but one of them named Marko Mägi as potential supervisor for this task.

Entry n°: 47

Date & time: 2022/06/11 - Afternoon

Weaver: Sunny – 27C°

Place: Raadi park koos dendropargiga and Raadi cemetery

Number: Between 20 and 40, of the three different species.

Observation: The first observation was at Raadi park, with hope to find the nesting area of *C. monedula*, which was still unknown, but only *C. cornix* could be observed here (see videos R01 to R03). In Raadi cemetery, different individuals from *C. cornix* (see videos R05 to R07), *C. frugilegus* (see videos R09, R10, R12, R13 and R15) and *C. monedula* (see video R08) species were observed, sometimes having noisy and quite aggressive interactions (see videos R11, R14). Some of these interactions were not recorded due to their very close proximity with ongoing funerals, according to the ethical declaration of the project.

Special note: Previous visit did not show such aggressive behaviour, but at least 6 fighter jets had passed over the area this afternoon, and it is possible that the species were abnormally stressed.

Entry n°: 48

Date & time: 2022/07/12 – 15:30

Weaver: Sunny – 36C°

Place: Champ de Mars, Paris

Number: 3

Observation: The unique pair remaining in the Champ de Mars was found again, but no other sign of the rest of the flock. The pair was very mobile and only in the trees (they did not stay in the ground, mostly

due to the high number of tourists, policemen and militaries walking in the area at this time). They have been in interaction with another individual, that seemed to call for them and remains beak open for most of the waiting time (see videos R01 and R02), probably a grown-up youngling.

Special note: Observations were massively shortened up due to the density of crowd, usual during days surrounding the French National Day – 14th July – and to the fact that using the camera next to militaries and policemen made them nervous.

Entry n°: 49

Date & time: 2022/07/15 -

Weaver: Sunny – 38C°

Place: Jardin des Plantes, Paris

Number: Between one and two hundreds

Observation: The crows are very bold and are not afraid to come close to humans in a range of few centimetres sometimes (see videos R03, R12 and R15). Most of their food seems to be compounded of wastes than humans left behind or throw away (see videos R01 and R14), but they are also fed on purpose by tourists, and are begging for that on purpose (see videos R13 and R15). They can also be seen foraging the ground (see video R02) or chasing insects (see video R05). They are comfortable enough with human presence to rest directly on the ground in the shade (see videos R04 and R06). Paris was experiencing an heat wave at this time, and they are clearly using the water system installed for avoiding the death of most fragile plants to refresh themselves (see videos R07 to R10 and R16). Even with the important number of individuals presents, fights are rare (but they due happen, see video R11), and they are coexisting with other birds like pigeons peacefully most of the time (see video R14).

Special note: All the metadata in the video files are two hours later than the real hour, due to the fact that the camera a) is not

Figure 1 - Sample of field observations diary - Summer, Paris



Figure 2 - Video rush P_SM_220712_R02 (1:04) showing the probable youngling of the last pair of the Champ de Mars.



Figure 3 - Video rush P_SM_220715_R08 (0:11) showing an individual "showering" under the water system installed to protect fragile plants from the heat wave.



Figure 4 - Video rush P_SM_220715_R04 (1:04) showing an individual resting on the ground, few meters away from gardeners and passers-by.