

Sylvine VENETZ
Illustrations Jacky BRETAUDEAU

CLUB DU
BULLDOG ANGLAIS

We warmly thank the 196 bulldog owners who participated and returned the

## Bulldog Health Questionnaire.

342 Questionnaires were returned (as of October 2011);

2 were not useable which left

340 to study and assess the findings.

On initial appraisal we see an extremely high individual pet owner participation

- Individual pet owners: 160 (81.63\%) Number of dogs: 195; Average of 1.2 dogs per person.
- Breeders : 36 (18.37\%) Number of dogs: 147; Average of 4.08 dogs per breeder
- Including breeder members of the Ethical Breeding Code: 18 (half of the breeders that participated) Number of dogs: 107;
Average of 5.94 dogs per ethical code breeder member


## I) - Pedigree registered or non Pedigree registered. (LOF/NON LOF) :

The majority of dogs were Pedigree registered:

## LOF : 94\%!

NON LOF 4\%
Some participants, and members of the Bulldog Club of France, who read our Bulldogger magazine and consult our Internet site, own non-registered bulldogs (non LOF). We are pleased to welcome them, even though the first priority of the Bulldog Clun is to promote pedigree bulldogs, the Club is open to everyone who is a lover of the bulldog regardless of the background and origins of their pet.soit l'origine ou l'histoire de leur compagnon bulldog, et même si la vocation première d'un Club est la promotion du chien de race


## II) - Breakdown by Age and Sex :

The majority of questionnaires concerned "Bitches" with a large age scale covering all lifespan periods from 6 months to 14 years.



Age distribution for bitches

$1^{\circ}$ ) Bitches : 63\%
Average age of bitches : 4.32 years ( 6 months to 12.5 years)

Age distribution for dogs


Average age of dogs : 4.03 years ( 6 months to 14 years)


Bitches weight


Dogs Weight

$2^{\circ}$ ) Weight of Dogs
Average weight: 27.48 kg (16 to $\mathbf{3 7} \mathbf{~ k g}$ )

## I - ABSENCE OF ILLNESS

YES : 69 (20\%) NO: 271 (80\%)
One bulldog in 5 declared to be in perfect health, no medical illness!

## II - MUSCULOSKELETAL SYSTEM ILLNESS

## $1^{\circ}$ ) Bone Disease:

YES : 11 (3\%) NO : 319 NO ANSWER : 10
Average weight : 26.18 kg
Average age : 5 years ( 1 to 10 years)
5 dogs; 6 bitches
4 cases of bone fracture and 1 bone tumor.
$2^{\circ}$ ) Joint Conditions:
YES : 68 (20\%) NO : 269 NO ANSWER : 3
Average weight 25.86 kg
Average Age 6.03 years (1 to 12 years)
15 bitches; 53 dogs
64 Pedigree; 4 Not Pedigree Registered


Joint Conditions

| PATHOLOGY |  | NUMBER |  | \% |  | TOTAL POPULATION |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Accident |  | 1 |  | 1.41 |  | 0.29 |  |
| Lameness | front | 1 | 16 | 1.41 | 22.53 | 0.29 | 4.7 |
|  | Rear | 8 |  | 11.26 |  | 2.35 |  |
|  | Growth related | 2 |  | 2.82 |  | 0.59 |  |
|  | Various causes | 5 |  | 7.04 |  | 1.47 |  |
| Spinal defects, bone spurs, hemivertebrae |  | 5 |  | 7.04 |  | 1.47 |  |
| Arthritus |  | 18 |  | 25.35 |  | 5.29 |  |
| Cruciate Ligament Injury |  | 17 | 23 | 23.94 | 32.4 | 5 | 6.76 |
| Patella Laxity |  | 3 |  | 4.23 |  | 0.88 |  |
| Patella Luxation |  | 3 |  | 4.23 |  | 0.88 |  |
| Hip Dysplasia |  | 1 |  | 1.41 |  | 0.29 |  |
| Various Sprains |  | 7 |  | 9.86 |  | 2.06 |  |
| TOTAL : |  |  |  |  |  |  |  |

Skeletal (bone) pathology signaled in $20 \%$ of the questionnaires concerned a high majority of dogs rather that bitches (41.4\% of the dogs studied).
Almost 5\% of the total study population presented some form of lameness.
The principal skeletal problems are signs of arthritis, knee infections, and in particular Cruciate Ligament Injury.
$3^{\circ}$ ) Muscular Pathology :
YES: 6(2\%) NO: 325 NO ANSWER: 9
Average weight 26.33 kg
Average age 4.16 years ( 3 to 6 years)
4 bitches, 2 dogs
All Pedigree


## III - CARDIOVASCULAR DISEASE

$\left.1^{\circ}\right)$ Heart and Blood Vessels:
YES: 7(2\%) NO: 329 NO ANSWER: 4
Average weight 26.7 kg
Average age 6.3 years
2 bitches ( $0.94 \%$ of the bitches)
5 dogs ( $3.9 \%$ of the dogs)
6 Pedigree; 1 not pedigree registered
5 having heart treatment
2 taking diuretic medication
Very few cardiovascular pathology declared!
Mentioned: heart liver disease, heart murmur, stenosis (type not communicated) and adrenal tumors.

## $2^{\circ}$ ) Respiratory system:

a) Lung Disease:

YES: 8(2\%) NO: 328
NO ANSWER: 4
Average weight 24.75 kg
Average age 3.9 years
5 bitches, 3 dogs
All pedigree
Illness associated with Brachycephalic syndrome mentioned in 1 out of 8 cases.
IIIness associated following heatstroke mentioned in 2 out of 8 cases.
Only 8 cases of Pulmonary disease mentioned including 2 acute pulmonary oedema and 1 tracheal hypoplasia.
b) Nasal and sinus illness:

YES: 12 (4\%) NO: 320 NO ANSWER: 8
Average weight $25.83 \% \mathrm{~kg}$
Average age 4.9 years
5 bitches (2.35\% of the bitches)
7 dogs ( $5.46 \%$ of the dogs)
10 pedigree; 1 not pedigree registered; 1 unknown 12 cases including 6 soft palate (1.76\% PT) et/or 5 stenotic nares (1.47\% PT) and 2 infections.


## c) Brachycephalic syndrome:

YES: 27(8\%) NO: 280 NO ANSWER: 33
Average weight 26.67 kg
Average age 4.06 years
9 bitches ( 4.24 of the bitches)
18 dogs ( $14 \%$ of the dogs)
26 pedigree; 1 not pedigree registered
Immediately, and surprisingly, we can observe the important number of 'NO ANSWER'S'. Should we deduce that this is due to a lack of knowledge in regard to the Brachycephalic syndrome. It is highly probable that the percentage of $8 \%$ is underestimated and in reality is surely nearer 12 or $13 \%$ of the total study population.
In 8 cases (30\%) including recovery from heatstroke
$0 \%$ association with cardiovascular disease
29\% association with joint conditions
Problems multiplied by 3 in dogs.

## d) Heatstroke

YES: 37(11\%) NO: 269 NO ANSWER: 34
No Answer: 6 breeders out of 29 questionnaires
Average weight 25.6 kg
Average age 5.3 years
20 dogs ( $15.6 \%$ of the dogs)
17 bitches ( $8 \%$ of the bitches)
34 pedigree, 2 not pedigree registered, 1 unknown


Same observation as above concerning the number of 'NO ANSWER'S'. The true percentage is more than likely higher than (16\% ?)

- $32 \%$ association with joint conditions
- $5 \%$ association with cardiovascular disease.

Dogs are twice more likely than bitches to suffer from heatstroke.


## IV - SKIN PROBLEMS :

## $1^{10}$ ) Infection:

Bacterial pyoderma is mentioned 13 times, 3.82\% of the questionnaires

## $2^{\circ}$ ) Allergies

YES: 44(13\%) NO: 292 NO ANSWER 4
Average weight 26.9\%
Average age 4.76 years
18 bitches ( $8.5 \%$ of the bitches)
26 dogs (20.3\% of the dogs)
39 pedigree, 3 not pedigree registered, 2 unknown


| PATHOLOGY | NUMBER | $\%$ | \% TOTAL <br> Population |
| :--- | :---: | :---: | :---: |
| Various, undetermined | 22 | 50 | 6.47 |
| Diet | 6 | 13.63 | 1.76 |
| Mites | 4 | 9.09 | 1.18 |
| Flea allergy dermatitis | 4 | 9.09 | 1.18 |
| Chiggers | 2 | 4.55 | 0.59 |
| Hot spots | 2 | 4.55 | 0.59 |
| Grass | 2 | 4.55 | 0.59 |
| Atopic | 1 | 2.27 | 0.29 |
| Medication | 1 | 2.27 | 0.29 |
|  |  |  |  |

$50 \%$ of allergies are of unknown origins for breeders and individual pet owners alike. We can however note that allergic reactions are often associated with the presence of skin parasites (20.4\%), dermatological infections
(22.7\%), nose roll infection (34\%), ocular problems
(47.7\%), joint problems (38.6\%).

Over representation of dogs.

- $20.4 \%$ of individual pet owners dogs were neutered/spayed, 18\% had reproduced.
- $61.3 \%$ had consulted their veterinary surgeon in the past year.


## $3^{\circ}$ ) Parasitoses

YES: 26(8\%) NO: 311 NO ANSWER: 3
Average weight 26.57 kg
Average age 3.6 years

13 bitches (6.13\% of the bitches)
13 dogs ( $10.15 \%$ of the dogs)
23 pedigree, 1 not pedigree registered, 2 unknown


| PATHOLOGY | NUMBER | $\%$ | \% Total Population |
| :--- | :---: | :---: | :---: |
| Demodicosis | 9 | 50 | 2.65 |
| Scabies | 5 | 27.8 | 1.47 |
| Piroplasmosis | 1 | 5.55 |  |
| Ringworm | 1 | 5.55 |  |
| Fleas | 1 | 5.55 |  |
| Roundworm!!! | 1 | 5.55 |  |
| TOTAL: |  |  | 5.29 |

Demodicosis accounts for 50\% of the number of declared cases (which represents, with the number of scab cases, demodex skin mite based, more than 4\% of the total population).

- Association with nose roll infections: 38.5\%
- Association with ocular infection: $42.3 \%$
- 30.8\% of the dogs had been neutered/spayed (1 dog and 7 bitches)
- $61.5 \%$ had consulted their veterinary surgeon on average 6 times in the year


## $4^{\circ}$ ) Nose roll infection

YES: 71(21\%) NO 257 NO ANSWER 12
Average weight 25.6 kg
Average age 5.12 years
43 bitches ( $20.28 \%$ of the bitches)
28 dogs ( $21.8 \%$ of the dogs)
69 pedigree, 2 not pedigree registered

$21 \%$ of the questionnaires indicate that infection of the nose roll remains a serious health problem associated with the bulldog. For once, dogs and bitches are equally affected.

- Association with joint conditions: $29.6 \%$
- Association with Brachycephalic syndrome: 9.8\%
- Dogs having suffered from heatstroke: 18.3\%
- Association with ocular problems: 28.2\%
- Association with ear infections: $26.8 \%$
- Neutered/spayed dogs: 28.16\% (3 dogs, 17 bitches)
- $38 \%$ had reproduced
- $59 \%$ had consulted their veterinary surgeon on average 3.3 times in the year.

| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population |
| :--- | :---: | :---: | :---: |
| Inter digital cysts | 28 | 40 | 8.23 |
| Nose roll pyoderma | 22 | 31.43 | 6.47 |
| Inverted tails | 20 | 28.57 | 5.88 |
| TOTAL : |  |  | 20.58 |

## V-OCULAR PATHOLOGY :

YES: 98(29\%) NO: 239 NO ANSWER: 3
Average weight 25.37 kg
Average age 4.6 years
58 bitches ( $27.35 \%$ of the bitches)
40 dogs ( $31.25 \%$ of the dogs)
90 pedigree, 4 not pedigree registered, 4 unknown

| PATHOLOGY | NUMBER | $\%$ | Total <br> Population |
| :--- | :---: | :---: | :---: |
| Cherry eye | 34 | 33 | 10 |
| Entropion | 18 | 17.49 | 5.29 |
| Ectopic cilia | 13 | 12.62 | 3.82 |
| Conjunctivitis | 13 | 12.62 | 3.82 |
| Ulcerated cornea | 12 | 11.65 | 3.53 |
| Keratitis (cloudy eye) | 7 | 6.8 | 2.05 |
| Abscess | 1 | 0.97 |  |
| Allergy | 1 | 0.97 |  |
| Blocked tear duct | 1 | 0.97 |  |
| Ectropion | 1 | 0.97 |  |
| Cataract | 1 | 0.97 |  |
| Palpebral Tumor | 1 | 0.97 |  |
|  |  |  |  |

Ocular Pathology


Association with joint conditions: 23.5\%
Association with Brachycephalic syndrome: 14.3\%

- Dogs having suffered from heatstroke: $11.2 \%$
- Association with an allergy: 21.4\%

Association with nose roll infections: 20.4\%

- Association with ear infections: $26.5 \%$ $29.6 \%$ had been spayed/neutered ( 21 bitches, 8 dogs)
- $38.8 \%$ had reproduced ( 6 dogs, 33 bitches)
- $57 \%$ had consulted their veterinary surgeon on average 3.6 times in the year

Here we see the biggest surprise of the health questionnaire. The particularly high number of ocular infections occurring in practically $1 / 3$ of the bulldogs. Essentially, palpebral infections and prolapse of the nictitating membrane, dry eye often associated with Cherry Eye as well as other associated conditions (conjunctivitis, ulcerated cornea, keratitis). It is obvious that the facial structure of the bulldog, the short nose in conjunction with heavy skin wrinkles is one of the factors behind these problems.
Cases are almost identical in dogs and bitches alike.


## VI- EAR INFECTIONS :

YES: 60(18\%) NO: 274 NO ANSWER: 6
Average weight 26.38 kg
Average age 5.83 years
29 bitches (13.68\% of the bitches)
31 dogs ( $24.21 \%$ of the dogs)
54 pedigree, 4 not pedigree registered, 2 unknown

| PATHOLOGY | NUMBER | \% | \% Total <br> Population |
| :--- | :---: | :---: | :---: |
| Otitis | 47 | 84 | 13.82 |
| Congenital Deafness | 4 | 7 | 1.17 |
| Other: ear hematoma, age <br> related deafness, Allergy, <br> dermatitis | 5 | 9 | 1.47 |
| TOTAL |  |  |  |



Again, a surprise that ear infections are, in general, so frequent notably otitis particularly associated with parasite infection such as ear mange. Dogs are twice more likely to suffer than bitches.
Note the non-negligible percentage of congenital deafness (more than 1\%).

- Association with ocular problems: 43.3\%
- Association with neurological infections: $11.6 \%$
- $26.6 \%$ had been spayed/neutered (11 bitches, 5 dogs)
- $63.3 \%$ had consulted their veterinary surgeon on average 3.4 times in the year


## VII- HORMONAL OR METABOLIC DISORDERS :

YES 6 (2\%) NO 327 NO ANSWER 7
Average weight 22.33 kg
Average age 4.7 years
100\% bitches
5 pedigree, 1 not pedigree registered
Practically absent, Cushing Disease and hormonal alopecia.

## VIII- PATHOLOGY OF THE NEUROLOGICAL SYSTEM BEHAVIOUR PROBLEMS :

## $1^{\circ}$ ) Nervous system :

YES 15 (4\%) NO 319 NO ANSWER 6 Average weight 25.87 kg Average age 4.21 years Bitches 8 (3.77 \% of the bitches)
Dogs 7 (5.47 \% of the dogs) 13 pedigree
2 not pedigree registered


| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population |
| :--- | :---: | :---: | :---: |
| Trembling | 11 | 78.5 | 3.23 |
| Epilepsy | 3 | 21.5 | 0.88 |
| TOTAL: |  |  | 4.11 |

Illnesses touching the nervous system are only mentioned in 4\% of the health questionnaires however it is interesting to notice the number of trembling cases of unknown origin. Often benign, they can however worry owners who are unaware. They manifest primarily as head tremors during rest periods.

- Association with joint conditions: $46.6 \%$
- Association with an allergy: 33.3\%
- Association with ocular problems: $46.6 \%$
- Association with ear infections: $46.6 \%$
- $38.8 \%$ had reproduced
- $53.3 \%$ had consulted their veterinary surgeon on average 7.5 times in the year


## $2^{\circ}$ ) Behaviour problems :

YES 17 (5\%) NO 317 NO ANSWER 6
Average weight 25.51 kg

- Association with joint conditions: 29.4\%

Average age 4.26 years
11 bitches ( $5.18 \%$ of bitches) 6 dogs $4.68 \%$ of dogs) 100\% pedigree

| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population |
| :--- | :---: | :---: | :---: |
| Aggression | 7 | 43.75 | 2.05 |
| Hypersensitivity | 3 | 18.75 | 0.88 |
| Coprophagy | 2 | 12.5 | 0.58 |
| Territorial issues | 1 | 6.25 |  |
| Hyperactivity | 1 | 6.25 |  |
| Sociopathy | 1 | 6.25 |  |
| Deprivation syndrome | 1 | 6.25 |  |
| TOTAL : |  |  | 4.7 |

- Association with nose roll infections: 29.4\%
- Association with ocular problems: $41.2 \%$
- Association with ear infections: 29.4\%
- $23.5 \%$ had been spayed/neutered (3 bitches, 1 dog)
- $41.17 \%$ had reproduced ( 5 bitches, 2 dogs)
- $47 \%$ had consulted their veterinary surgeon on average 3.4 times in the year


Nearly 5\% of bulldogs presented some form of behaviour problems, such as $2 \%$ aggression when in contact with other dogs.
Other issues were anecdotal in nature.
Curiously the findings concern dogs and bitches, with a slight increase for the bitches.

## IX- PATHOLOGY OF THE DIGESTIVE SYSTEM :

$1^{\circ}$ ) Mouth - Teeth :
YES 11 (3 \%) NO 322 NO ANSWER 7
Average weight 24.24 kg
Average age 8.18 years
8 bitches ( $3.77 \%$ of bitches)
3 dogs ( $2.34 \%$ of dogs)
10 pedigree, 1 not pedigree registered

- $63.63 \%$ had consulted their veterinary surgeon on average 3.8 times in the year
$1 / 3$ of the cases of oral problems were tumors in very old individual pet owned dogs.
$2^{\circ}$ ) Esophagus - Stomach :
YES 10 (3 \%) NO 323 NO ANSWER 7
Average weight 26.1 kg
Average age 3.54 years
3 bitches ( $1.41 \%$ of bitches)
7 dogs (5.46 \% of dogs) 100\% pedigree
4 cases of gastritis; 3 chronic cases of sickness; 1 case of twisted gut.
The study has shown a relation between the Brachycephalic syndrome and inflammations of the esophagus and the stomach. Nevertheless, the study, of 340 bulldogs, does not allow us to give a frequency to this pathology.
- Association with nose roll infections: 30\%
- Association with joint conditions: 30\%
- Association with ocular problems: 30\%
- Association with ear infections: 40\%
- Association with an intestinal illness: 30\%
- $41.17 \%$ had reproduced
- $80 \%$ had consulted their veterinary surgeon on average 1.9 times in the year
$3^{\circ}$ ) Intestines - Anal glands :
YES 15 (4 \%) NO 319 NO ANSWER 6
Average weight 25.86 kg
Average age 4.56 years
5 bitches ( $2.35 \%$ of bitches)
10 dogs ( $7.81 \%$ of dogs)
14 pedigree 1 not pedigree registered
$4^{\circ}$ ) Diseases affecting organs and glands associated with the digestive tract: liver, pancreas, gall bladder

| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population |
| :--- | :---: | :---: | :---: |
| Anal gland abscess | 5 | 35.71 | 1.47 |
| Chronic diarrhea | 7 | 50 | 2.06 |
| Problems associated with <br> age | 2 | 14.29 | 0.59 |
| TOTAL : |  |  | 4.12 |

Only 1 not detailed case was reported (organ unknown).

## X- HAEMATOLOGY - BLOOD DISORDERS :

$1^{\circ}$ ) Anaemia :
1 case reported (problems with coagulation).
Bitch of 9 years weighing 19 kg

## $2^{\circ}$ ) Cancers of the blood :

no case reported.

## $3^{\circ}$ ) Disease of the spleen :

2 cases - 2 removals, 1 after twisted gut.

## XI- PATHOLOG OF THE URINARY SYSTEM :

$1^{\circ}$ ) Kidney :
Only 3 cases reported ( $0.88 \%$ ) one being renal cancer Age - 1 to 10.5 years old!
2 dogs, 1 bitch
Average weight 22.25 kg
Pedigree

## $2^{\circ}$ ) Bladder :

YES 20 (6\%) NO 314 NO ANSWER 6
Average weight 25.95 kg
Average age : 4.95 years
12 bitches ( $5.66 \%$ of bitches)
8 dogs ( $6.25 \%$ of dogs)
19 pedigree, 1 not pedigree registered
Bladder Pathology


Bladder infections, in particular the presence of urinary stones (sadly the nature was not indicated) are relatively frequent.

Can this be associated with hyperuricosuria, metabolic problems which create excessive amounts of uric acid in urine and blood. The age is compatible (3 to 6 years). This autosomal recessive disorder, according to certain study findings, is carried by 35\% of bulldogs. Our study shows a frequency of symptoms at around 5\%. (Genetic tests exist, proposed by various laboratories, which detect the dogs predisposed before onset of symptoms, also confirm the presence in dogs already showing symptoms and eventual treatment or suitable dietary recommendations in cases of high risk).

It is recommended not to use carriers for breeding.

- Association with joint conditions: 25\%
- Association with ocular problems: $35 \%$
- Association with ear infections: $20 \%$
- $30 \%$ had been spayed/neutered ( 4 bitches, 2 dogs)
- $35 \%$ had reproduced ( 6 bitches, 1 dog)
- $65 \%$ had consulted their veterinary surgeon on average 3 times in the year



## XII- PATHOLOGY OF REPRODUCTIVE SYSTEMS

$1^{\circ}$ ) Dogs:
YES 16 (12 \%) NO 107 NO ANSWER 6
Average weight 25.43 kg
Average age 4.34 ans
113 pedigree, 2 not pedigree regis-
tered, 1 unknown
Pathology
of dog reproductive
system $\quad 5 \% \quad 12 \%$


- Association with ocular problems: $42.8 \%$
- Association with allergy: $28.6 \%$
- Association with ear infections: $28.6 \%$
- $57 \%$ had been neutered
- None had reproduced
- $42.9 \%$ had consulted their veterinary surgeon on average 2.4 times in the year



## $\left.2^{\circ}\right)$ Bitches :

| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population <br> (127 Dogs) |
| :--- | :---: | :---: | :---: |
| Monorchids | 7 | 44 | 5.51 |
| Cancer | 3 | 18.75 | 2.36 |
| Cryptorchids | 2 | 12.5 | 1.57 |
| Prostate | 2 | 12.5 | 1.57 |
| Prostatic hyperplasia | 1 | 6.25 | 0.78 |
| Genital prolapse | 1 | 6.25 | 0.78 |
| TOTAL : | 16 |  | 12.57 |

YES 33 (15 \%) NO 175 NO ANSWER 11
Average weight 24.53 kg
Average age 6 ans
32 pedigree, 1 not pedigree registered


| PATHOLOGY | NUMBER | $\%$ | \% Total <br> Population <br> (212 bitches) |
| :--- | :---: | :---: | :---: |
| Metritis | 11 | 39.29 | 5.19 |
| Virginity | 8 | 28.57 | 3.77 |
| Mammary tumors | 3 | 10.72 | 1.41 |
| Phantom pregnancy | 2 | 7.14 | 0.94 |
| Mastitis | 2 | 7.14 | 0.94 |
| Pyometra | 2 | 7.14 | 0.94 |
| TOTAL: |  |  |  |

If we ignore Caesarean sections, virtually systematic in the bulldog breed, the principal illnesses in bitches, (mainly metritis and vaginitis) appear relatively late (average 6 years old).

- Association with joint conditions: $36.4 \%$
- Association with ocular problems: $45.4 \%$
- Association with ear infections: 30.3\%
- $54.5 \%$ had been spayed
- $57.6 \%$ had reproduced
- $60.6 \%$ had consulted their veterinary surgeon on average 1.9 times in the year


## XIII- NEUTERING/SPAYING :

YES 76 (22\%) NO 258 NO ANSWER 6 Average weight 24.68 \% Average age 6.24 years

61 bitches 15 dogs
69 pedigree, 5 not pedigree registered, 2 unknown
52.6\% had consulted their veterinary surgeon on average 3 times in the year.


More than $20 \%$ of the bulldogs in this study had been either neutered or spayed (34.2\% after having reproduced, all bitches).

## XIV-REPRODUCTION :

YES 138 (41\%) NO 179 NO ANSWER 23
Average weight 25 kg
Dogs 36 (28.12 \% of dogs)
Bitches 102 (48.11 \% of bitches)
135 pedigree, 1 not pedigree registered, 2 unknown
Out of the dogs that had reproduced, 847 (25.6\%) belonged to breeders of which 67 (19.7\%) had signed the ethical breeding code.

Dogs having reproduced


76\%


- Association with joint conditions : 18.8\%
- Association with Brachycephalic syndrome: 3.6\%
- Dogs having suffered from heatstroke: $11.6 \%$
- Association with an allergy: 5.8\%
- Association with nose roll infections: $19.6 \%$
- Association with ocular problems: $27.5 \%$
- Association with ear infections: $14.5 \%$
- Association with behavior problems: $5 \%$
- $31.9 \%$ had consulted their veterinary surgeon on average 2.3 times in the year


## VI- VETERINARY VISITS (other than for vaccinations)

YES 140 (42\%) NO 134 NO ANSWER 66
Average weight 25.6 kg
Average age 4.35 years
78 bitches ( $36.8 \%$ of the bitches)
62 dogs (48.4 \% of the dogs)
128 pedigree, 8 not pedigree registered, 4 unknown
20.71 of the owners were breeders.

Average of 2.88 visits in the year

Veterinary Visits other than for vaccinations


| Pathology |  | \% |  |
| :---: | :---: | :---: | :---: |
| Dermatology | Nose roll infections | 21 | 46 |
|  | Parasites | 8 |  |
|  | Allergies | 13 |  |
|  | Infections | 4 |  |
| Eyes |  | 29 |  |
| Respiratory and Cardio Vascular | Heatstroke | 11 | 27 |
|  | Brachycephalic syndrome | 8 |  |
|  | Nasal and sinus | 4 |  |
|  | Lungs | 2 |  |
|  | Heart and blood vessels | 2 |  |
| Musculoskeletal system | Muscular |  |  |
|  | Joints | 20 |  |
|  | Skeletal |  |  |
| Ears |  | 18 |  |
| Reproductive system | Bitches | 15 |  |
|  | Dogs | 11 |  |
| Digestive System | Bowels and anal glands | 4 | 10 |
|  | Esophagus - Stomach | 3 |  |
|  | Mouth and teeth | 3 |  |
| Neurological system and Behaviour Problems | Behaviour | 5 | 9 |
|  | Nervous system | 4 |  |
| Urinary System | Bladder | 6 | 7 |
|  | Kidney | 1 |  |
| Hormonal and metabolic disorders |  | 2 |  |

To sum up, the Bulldog Health Questionnaire sent out in 2011 by the Bulldog Club of France and completed by 196 people, 36 of who were breeders, for a total of 340 study cases, permits us to outline the relative importance of certain illnesses :

- Skin problems : nearly one out of two bulldogs had some form of skin infection, particularly nose roll infection or allergy.
- Ocular problems : one out of six bulldogs had cherry eye problems. Entropion, Ectopic cilia and the damage on the cornea such as ulcers and cloudy eye are also often mentioned.
- Cardio-vascular and respiratory problems: appear to be related to cases of heatstroke, severe anoxic spells not necessarily associated with high temperatures. Curiously, many bulldog owners, including some breeders, did not reply to the questions concerning the Brachycephalic syndrome and heatstroke.
- Skeletal problems : largely dominated by cases of arthritis and knee instability with or without cruciate ligament injury.
- Ear problems: 14\% of the case study bulldogs had suffered from ear inflammation, often chronic.

Other organs do not present significantly abnormal pathologies perhaps apart from urinary stones with are relatively frequent ( $6 \%$ ) and merit further more in depth analyses, as do undiagnosed head tremors (3\%) and some aggressive behavior issues (5\%).

This study, thanks to the exceptional participation of those passionate about the bulldog, provides an overview into the health of the bulldog that we love so much. The study shows that we still have work to do with regards the selection of a healthy breeding stock, in informing and educating individual pet owners and breeders alike and in the prevention of the principal illnesses. The tools to do this are in place (the Bulldogger magazine, the Club internet site, the TAN tests (aptitude and fitness test), Breeders Commission, Veterinary Studies and Research etc ....). As well this current study indicates that we have an important population of bulldogs in good health and that is very encouraging!

Huge thanks to all who participated.


