



Quarterly Bulletin • 2023 • Issue 2 • May 2023

PRESIDENT'S MESSAGE

Jamie Harshfield

Dear GDCA Members,

New Committee Chair positions have been approved. The list will be updated on the GDCA website soon.

New procedures for the elections of National Division Chair, National Show Chair, National Treasurer and National Secretary have been approved and are effective immediately. This new process is designed for a smooth transition between each Division while still remaining compliant with the GDCA National Specialty Show Rules & Regulations (NSSR). The changes are reflected in the revised NSSR which are posted on the GDCA webpage. I would encourage all affiliate clubs to review this process prior to National Division Elections. If you have any questions regarding the new process please contact Linda Cain (GDCA Affiliate Club Representative) fromtheheartkennel@sbcglobal.net

This year, the Westminster Kennel Club hosted a Meet the Breed Showcase. Great Danes were one of the select few chosen to participate. The event was very well attended and our Great Dane representatives did not disappoint! Many thanks to the following participants: Carol Ann Wilbur, Jenn Mack, and Sara Rachel Chant. Your time and effort to educate the public about our wonderful breed is GREATLY appreciated.

AKC currently has two Meet the Breed events planned in the near future. The cities and dates are listed below:

Chicago IL – August 26-27, 2023
Columbus OH October 14, 2023

If anyone is interested in volunteering to support AKC efforts, please contact a GDCA Board member for more information.



Plans for the 2023 GDCA National that is hosted by the Western Division are well underway. Please continue to check for updates on the GDCA 2023 National Facebook page as well as the GDCA webpage. Thank you to all the many committee volunteers who are working to ensure everyone has the opportunity to experience "Great Dane Enchantment."

Thank you all for the continued support.

Jamie Harshfield
President, Great Dane Club of America

SECRETARY'S REPORT

Denise Matulich



Ballot for 2025 National Judges—Will be out soon! Please, note the most recent change that ONLY FULLY APPROVED AKC judges will be eligible to Judge the National. They must also meet the GDCA eligibility requirements. An updated list from AKC of fully approved Great Dane Judges will be available for reference on the GDCA web-site. Non approved Judges can be nominated to judge the futurity provided they meet the eligibility requirements.

Affiliate Club Rosters – Please make sure we have your most recent club roster on file. This is important so that your club will receive important notice and ballots. If an updated roster needs to be submitted, use the standardized form found on the GDCA website under the affiliate club tab to submit. We require that all clubs use this standardized form when sending in your annual rosters. The direct link is:

<https://gdca.org/the-gdca/affiliate-clubs/>

Affiliate Club Specialty Approvals—As a reminder, all affiliate club specialties require a GDCA approval to gain approval from AKC. In order to obtain a GDCA approval your club's dues need to be paid and a

current year roster of members and officers must be submitted along with the request which includes the dates and location of the specialty to DKMatulich@sbcglobal.net. Please note: It is up to the affiliate club to submit their request for GDCA approval to us. The process is not automatic and AKC does not notify us of your event application.

Affiliate Club Specialty Promotion—In an effort to promote our Affiliate clubs and their specialties, we encourage your club to send a JPEG ready flyer that can be posted to the GDCA Facebook page! We just require that your premium list is available so that anyone interested can obtain complete information regarding your show. We advise NOT using any personal phone numbers on the flyer to be posted as the page is a public forum open to all.

FUTURITY REPORT

Final numbers for the Futurity 2022
There were 152 litters nominated in 2022.
There were 347 puppies nominated with 160 dogs and 187 bitches.

The entry is as follows:

<i>Puppy Dogs</i>	<i>Puppy Bitches</i>
80	92
<i>Junior Dogs</i>	<i>Junior Bitches</i>
19	28
Total Entry for 2022:	219

2023 Futurity Stats as of September 22, 2022

- To date there are 77 litters nominated
- There were 111 puppies nominated with 56 dogs and 55 bitches

TREASURER'S REPORT

Kathy Munyan



As of April 30, 2023

Cash in Bank	\$28,329.12
Cash in Savings	\$162,425.94
Certificate of Deposit	\$159,803.52
Total	\$350,558.58

February 1, 2023—April 30, 2023

Income	\$31,321.45
Expenses	-\$11,240.86
Donations/Grants	-\$1,500.00
Net Income	\$18,580.59

November 1, 2022—April 30, 2023

Income	\$64,443.28
Expenses	-\$27,668.46
Donations/Grants	-\$1,500.00
Net Income	\$35,274.82

AFFILIATE CLUB REPRESENTATIVE (ACR) NEWS

Linda Cain

Hi All,

Topic 1 - National Division Positions

With the restructuring of the National Divisions from six to four it is **extremely important** that the National Specialty Rules and Regulations (NSRR) be followed to ensure a fair and equal representation of all Division Clubs. With this in mind, several steps must be performed.

Step 1 - Request 1 - North and East Division Affiliate Clubs:

An email was sent out to the Affiliate Club's President and Corresponding Secretary on April 26th and April 28th (respectively), asking that their clubs provide the names of two individuals from their club to become their "**Division Club Representative (DCR)**" using the Division Club Representative Form. Please keep in mind, the DCR position is **NOT** the same as the club's GDCA Affiliate, however, but they can be is your club chooses.

The persons selected to perform the DCR tasks, should be able to attend all division meetings and will subsequently be part of the entire Division Committee. The DCR form listing the names for the DCR positions is required to be returned to the GDCA Corresponding Secretary, Denise Matulich by **May 20th**.

Step 2 - Request 2 - The GDCA Corresponding Secretary will compile the results of the DCR forms. The results will be sent to the GDCA Affiliate Club Representative (ACR). The ACR will then email the DCRs requesting nominations for National Division positions using the **Division Club Election Nomination Form**. The form must be returned by **June 20th**. The selected DCR's will represent their affiliate clubs within the specific national division by **nominating** the following National Division positions:

- The Division Chairperson
- The Division Show Chairperson
- The Division Secretary
- The Division Treasurer

Step 3 - Request 3 - The ACR will email the DCR's within the division listing all nominees. A vote will be taken per the NSRR and documented on the Division Chair Election Result Form and will be sent to the GDCA Corresponding Secretary, Denise Matulich, by **July 20th** for the GDCA Board to vote on the approval of the elected Divisional Officers at the July GDCA Board Meeting to be held in Milwaukee. If for some reason, a nomination is not accepted by the Board, the person receiving the 2nd most votes will be considered, etc.

Upon approval of the National Division Committee positions, the nominees will be notified asap.

Please understand that this process is slightly different than that contained in the NSRR, however it is unavoidable so that we can ensure a fair election process for all divisions and clubs.

Please be prompt with your responses and send your forms to the GDCA Corresponding Secretary, Denise Matulich.

Please Note: Emails will be sent to the South Division and West Division as needed.

If you have questions, please ask and I will try to get you an answer.

Topic 2 - By-Laws - Follow the By-Laws

It is very important that each club follow their Constitution and By-Laws. It is imperative that if your club's By-Laws do not state that electronic/telephonic meetings may be held, the By-Laws need to be updated before holding electronic/telephonic meetings and you need to check for state and local laws regarding holding these types of meetings.

Let's work together to accomplish great things for our GREAT DANES.

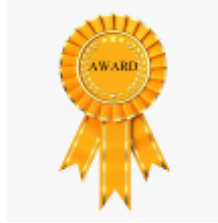
Thanks for your time.

Linda Cain (ACR)

GDCA Award Certificates

For Quarter 1 of 2023 the following were requested and processed:

- 1 Hall of Fame
- 1 Register of Merit
- 4 Honor Roll
- 2 Versatility
- 4 Venerable



GREAT Danes
at
Westminster!



TOP OBEDIENCE DANES

The top Great Danes in each class as determined by average scores. Scores are taken from "AKC Awards" and include trials from April 2022 through March 2023. You must have more than one score to be ranked.

Compiled by Gayle Smith

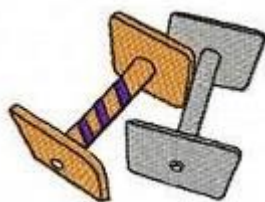
		Average	High Score	Placements	# Qs
				HIT-1 st -2 nd -3 rd -4 th	
NOVICE					
1	Lazy Days A New Hope CD BN RA CGC TKN	194.50	197.00	0—2—0—1—0	3
2	Lazy Days Sail On Sailor CD	193.75	194.00	0—2—0—0—0	2
3	Revenir-Champlain's Bewitching Dreamweaver CD RAE CGCA CGCU TKI	193.25	193.50	0—0—2—0—0	2
4	Oh Liz Of The Nile CD	192.67	193.50	0—1—1—0—1	3
5	Chroma Desert Wildflower CD CGCA TKN	189.00	192.00	0—0—1—1—1	3
6	Mr. Odis Babby CD	187.25	191.00	0—2—0—0—0	2
7	Dp-Kma-Crystallynn Beach Please CD RI	186.70	193.50	0—0—3—0—2	5
8	Sundown's Kindred Spirit of Malikai CD BN CGCA TKN	186.06	192.00	0—5—2—0—0	8
9	Danemark's Talk Derby To Me CD PCD BN RE FDC NJP CA DCAT ACT2 ACT2J SWME SHDA TT RATS DM DSX CGCA CGCU TKP ATT VHMA VSWE	184.00	187.00	0—0—1—2—0	3
10	Ashton's Classic Empire CD PCD BN RE FCAT2 CGCA TKI	183.33	189.50	0—0—0—2—0	3

OPEN

1	OTCH2 MACH2 Lazy Days Wild Thing of Sterlings UDX3 OM8 RA MXS MJC MFS TQX T2B	197.10	198.50	3—5—5—2—3	20
2	Lazy Days Legend In Leather UDX2 OM1 RN	194.80	195.50	0—0—0—0—0	5
3	Longo Miller N Lore's Blinded By The Light UD RN	191.63	197.00	0—0—1—0—1	4
4	RACH Lazy Days Force Awakens CDX BN RN2 RAE3 OA OAJ SWN SCNE CGC TKN	189.10	194.00	0—0—0—1—0	5
5	CH Enzo's You're A Cute Little Heart Breaker Zelda CDX BN RN CGC TKN	189.00	192.50	0—2—1—0—0	3
6	CH Sterling's Azure Fibonacci CDX RA CGC TKN	189.00	193.00	0—1—0—1—0	2
7	CH Chroma Liberty Paint The Night UD RA FDC CGCA TKN	186.75	191.00	0—0—0—0—2	2
8	Lazy Days I Believe I Can Fly CDX BN RI MXB MXJ MJB NAP NJP MFB NFP T2B	184.50	187.00	0—1—0—0—0	2
9	Lazy Days Gunpowder And Lead CDX RE AX OAJ OAP OJP NF NFP	182.00	182.00	0—1—1—0—0	2
10	RACH4 Zephyr Lincoln Wolbert CDX PCDX BN RM9 RAE8 THDN CGC TKA	174.83	178.00	0—2—0—1—0	3

TOP OBEDIENCE DANES (*Continued*)

UTILITY		Average	High Score	Placements	# Qs
				HIT-1 st -2 nd -3 rd -4 th	
1	OTCH2 MACH2 Lazy Days Wild Thing of Sterlings UDX3 OM8 RA MXS MJC MFS TQX T2B	194.18	198.50	1—2—2—2—2	11
2	Lazy Days Legend In Leather UDX2 OM1 RN	191.83	192.00	0—0—0—0—1	3
3	Longo Miller N Lore's Blinded By The Light UD RN	185.00	195.00	0—1—0—1—0	2
4	CH Chroma Liberty Paint The Night UD RN CGCA	182.67	189.50	0—1—1—1—0	3



AKC AGILITY RANKINGS

Regular Jump Height

March 2023

Trial Days 4/1/2022 to 3/31/2023

Rankings are based on Standard and Jumpers with Weaves classes only.

Report completed by Traci Rinoldo, Danegyrl@lifebytes.net

MASTER

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS	MACH Points	QQ's	Score
1	MACH Cilka's Silkroad Piratess MXB MJB MXF T2B DCAT CGC TKI	Gwen DeBaere D.V.M.	58	100.00	4.07	715	17	885
2	MACH Lazy Days I Believe I Can Fly CDX BN RE MXB MJS NAP NJP MFB NFP T2B	Mary D Shipman	45	100.00	4.57	754	13	884
3	OTCH2 MACH2 Lazy Days Wild Thing Of Sterlings UDX3 OM8 RA MXS MJC MFS TQX T2B	Gayle L Smith	34	100.00	3.70	279	15	429
4	GCHB CH Moonriver's The Heart Is A Lonely Hunter RN OA AXJ XF CA DCAT ACT2 ACT1J SWN CGCA CGCU TKP	Camille Durocher	2	100.00	4.66	23	0	23
5	Sterling's Obsidian Rosette Delizy OA AXJ OF ACT1 CGC TKN	Sterling Moffat	4	100.00	3.64	5	0	5

EXCELLENT

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	RACH Lazy Days Force Awakens CDX BN RM3 RAE3 AX AXJ OF SWN SCNE CGC TKN	Shirley Spall	5	100.00	3.42
2	Sterling's Obsidian Rosette Delizy OA AXJ OF ACT1 CGC TKN	Sterling Moffat	6	98.50	3.40

OPEN

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	RACH Lazy Days Force Awakens CDX BN RM2 RAE3 OA OAJ SWN SCNE CGC TKN	Shirley Spall	2	95.00	2.79

NOVICE

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	GCH CH Danemark's Talk Derby To Me CD PCD BN RE FDC NA NAJ NAP NJP NF CA DCAT ACT2 ACT2J SWME SHDA TT RATS DM DSX CGCA CGCU TKP ATT VHMA VSWE	Traci Rinoldo	9	95.56	2.71
2	Fendane Honey's Golden Solae' Sadie RI FDC NA NAJ DCAT ACT1 ACT2J DM DSA AN CGCA CGC	Leslie Bokemeyer	7	95.14	2.19
3	GCH CH Neet's Bigkat He's A Lynx BN RN FDC NA DCAT ACT1 ACT2J TT RATM CZ8B DM CJ AM CGCA CGCU	Jessica Gibbs	6	93.17	2.38
4	GCH CH Ace-Hi's Lightning Crashes V Tolsina RE NAJ TKN	Traci Knutson	3	92.33	2.61

AKC AGILITY RANKINGS

Preferred Jump Height

March 2023

Trial Days 4/1/2022—3/31/2023

Agility scores as reported directly from AKC. Please check AKC website to verify your information.

Rankings are based on Standard and Jumpers with Weaves classes only.

Ranking is calculated using the score (formula (QQs x 10) + points) for master class, and average score then average speed (YPS) for other classes.

Only dogs with more than 1 score are included in the ranking calculations.

Report completed by Traci Rinoldo, Danegyrl@lifebytes.net

MASTER

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS	MACH Points	QQ's	Score
1	PACH Cara Mia Evelina CD BN RE FDC MXP 5 MXPS MJP6 MJPS PAX MFPB TQXP T2BP2 FCAT2 ACT2 CGC TKA	Diana Lynne Sheatler	65	100.00	3.74	901	20	1101
2	Bella Luna Blu RE MXP MJP2 MJPB MFP T2BP2 DCAT ACT2 ACT2J CGC TKA	Diana Lynne Sheatler	43	100.00	3.95	630	7	700
3	Elleni Blackstone Thidwick The Moose RE MXP MJP3 MJPB MFP T2BP FCAT2 ACT2 CGC ATT	Deb Peatt	34	100.00	4.14	579	6	639
4	Danu's Splitting Atoms RE MXP MJP2 MJPB A CT2 TKI VHMA	Tabitha J Plambeck	22	100.00	4.85	495	5	545
5	Dantrydanes Violets Are Blue BN RA FDC MXP2 MJP2 MJPB NFP BCAT SCN RATN TKI ATT VHMA	Faith Abend	35	100.00	3.45	324	12	444
6	Ellenni's "S" Is For Superhero RE MXP MJP3 MJPB MFP T2BP FCAT3 ACT1 CGC ATT	Deb Peatt	24	100.00	3.69	258	3	288
7	Danu's Embrace Your Fate Tdt RN AXP AJP ACT1J TKN VHMP	Tabitha Plambeck	6	100.00	3.74	115	1	125
8	GCH CH Danu's Sinful Temptation For Tdt RI AXP MJP ACT1 CGC TKN VHMA	Tabitha Plambeck	5	100.00	3.27	25	1	35

EXCELLENT

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	Ford Westin Kickfitz OAP OJP	Kameron Kicklighter	3	100.00	4.40
2	Bella Luna Blu RA AXP AJP XFP T2BP BCAT ACT2 ACT2J CGC TKA	Diana Lynne Sheatler	4	100.00	3.89
3	Danu's Embrace Your Fate Tdt RN AXP AJP ACT1J TKN VHMP	Tabitha Plambeck	6	100.00	3.79
4	Lazy Days Gunpowder And Lead CDX RE AX OAJ OAP OJP NF NFP	Valery K Stevens	3	95.00	3.27

AKC AGILITY RANKINGS
Preferred Jump Height (continued)

OPEN

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	Ford Westin Kickfitz OAP OJP	Kameron Kicklighter	6	98.33	4.14
2	Lazy Days Gunpowder And Lead CDX RE AX OAJ OAP OJP NF NFP	Valery K Stevens	3	98.33	3.12
3	CH Dellisanes Say It Like You Mean It V Sublime RN NAP NJP BCAT ACT2 ACT1J	Donita Ellis	3	98.33	2.88
4	Danu's Embrace Your Fate Tdt RN OAP OJP ACT1J TKN VHMP	Tabitha Plambeck	5	98.00	3.87
5	Tered-Dbm N Payaso's Star Spangled Firecracker FDC NAP OJP NFP FCAT ACT1 ACT2J CGCA TKI ATT VHMA	Kennedy Morgan	5	98.00	3.32
6	Fendane Honey's Golden Solae' Sadie RA FDC NA NAJ NAP OJP DCAT AC2 ACT2J DMDSA AN CGCA CGCU TKP	Leslie Bokemeyer	5	95.60	2.65
7	Lampe's My Lady of Hauerdanes Sweet Isabella NAP OJP	Ms. Janet Ann Lampe	5	94.00	3.33

NOVICE

Rank	Dog Name	Owner Name	# of Scores	Avg Score	Avg YPS
1	Fendane Honey's Golden Solae' Sadie RA FDC NA NAJ NAP OJP DCAT AC2 ACT2J DMDSA AN CGCA CGCU TKP	Leslie Bokemeyer	6	98.33	2.53
2	Tered-Dbm N Payaso's Star Spangled Firecracker FDC NAP OJP NFP FCAT ACT1 ACT2J CGCA TKI ATT VHMA	Kennedy Morgan	6	95.83	3.15
3	Ford Westin Kickfitz OAP NJP	Kameron Kicklighter	6	95.83	3.13
4	CH Danemark's Talk Derby To Me CD PCD BN RE FDC NAP NJP CA DCAT ACT2 ACT2J SWME SHDA TT RATS DM DSX CGCA CGCU TKP ATT VHMA VSWE	Traci Rinoldo	4	94.25	2.21
5	Dellisanes Say It Like You Mean It V Sublime RN NAP NJP BCAT ACT2 ACT1J	Donita Ellis	5	93.00	2.69
6	Lampe's My Lady of Hauerdanes Sweet Isabella NAP OJP	Ms. Janet Ann Lampe	7	92.71	2.30



AKC RALLY RANKINGS

March 2023

Trial Days 4/1/2022—3/31/2023

Rally scores as reported directly from AKC. Please check AKC website to verify your information.

Rankings are based on the current average score. **Ties are broken by # of scores, then by high score.**

Only dogs with more than 1 score are included in the ranking calculations. For Invitational planning, the top 20 from each class are listed. Invitational information and rules can be found at: <https://bit.ly/3ojzHd2>

Report completed by Traci Rinoldo, Danegyrl@lifebytes.net

MASTER

Rank	Dog Name	Primary Owner	Avg Score	High Score	1 st	2 nd	3 rd	4 th	#Qs	HTQ
1	RACH Whitwind's Something Wicked This Way Comes CD PCD BN GN RM4 RAE4 FDC BCAT CGCA CGCU TKN ATT	Heather Whitaker	98.25	99	2	0	1	1	4	1
2	RACH4 Zephyr Lincoln Wolbert CDX PCDX BN RM9 RAE8 THDN CGC TKA	Stacy Jean Wolbert	97.67	100	3	1	5	1	24	4
3	Lazy Days I Believe I Can Fly CDX BN RE MX MXB MXJ MJB NAP NJP MFB NFP T2B	Mary D Shipman	97.50	98	0	2	0	0	2	0
4	Ashton's Epic Ambition CD PCD BN RE FDC CAX2 FCAT2 TT CGCA TKN	Dana E Sikes	97.00	98	0	0	0	1	5	0
5	Lady GaGa NanPar CD BN RE CGC	Nancy Parsons	96.00	96	0	0	2	0	2	0
6	Prd's The Old That Is Strong Does Not Wither RE TKP	Dr. Christine A Fleck	95.33	97	0	0	0	0	3	0
7	Lazy Days Gunpowder And Lead CDX RE AX OAJ OAP OJP NF NFP	Valery K Stevens	94.50	99	2	1	0	0	4	0
8	CH Danemark's Talk Derby To Me CD PCD BN RE FDC NJP CA DCAT ACT2 ACT2J SWME SHDN TT RATS DM DSX CGCA CGCU TKP ATTVHMA VSWE	Traci Rinoldo	93.17	99	1	1	1	1	6	1
9	RACH Lazy Days Force Awakens CDX BN RM3 RAE3 AX AXJ OF SWN SCNE CGC TKN	Shirley Spall	92.33	97	0	2	0	0	3	0
10	GCH CH Ace-Hi's Lightning Crashes V Tolsina RE TKN	Traci Knutson	92.00	100	1	1	0	0	3	1
11	Ellenni Blackstone Thidwick The Moose RE MXP MJP3 MJPB MFP T2BP FCAT2 ACT2 CGC ATT	Deb Peatt	89.80	96	0	0	0	0	5	0
12	Patientdanes Bless The Broken Road Rascal CD PCDX BN RM DCAT CGCA CGCU TKN	Joan Mrkvicka	85.86	97	0	0	0	1	7	0
13	Revenir Chaplain's Bewitching Dreamweaver CD RAE CGCA CGCU TKI	Laura Amick	85.43	96	0	0	0	0	7	0
14	Stardust's Demothi @ Nanpar CDX BN RAE TD CGC TKI	Nancy Parsons-Wright	85.33	90	0	0	0	1	3	0
15	Wysiwyg's Where to We Wander RM RATO CGC	Nancy Solow	84.57	94	0	0	0	0	7	0
16	Mr. Odis Babby CD BN RM FDC CA FCAT CGCA TKN	Ms. Danatte M Weaver	83.73	100	0	1	0	1	11	0
17	PACH Cara Mia Evelina CD BN RE FDC MXP4 MXPB MJP5 MJPS PAX MFPB T2BP2 FCAT2 ACT2 CGC TKA	Diana Lynne Sheatler	83.33	92	0	0	0	0	3	0
18	Ellenni's "S" Is For Superhero RE MXP MJP3 MJPB MFP T2BP FCAT3 ACT1 CGC ATT	Deb Peatt	81.50	90	0	0	0	0	2	0
19	Katrew's Chaos And Fury CD BN RM CGCA TKN	William S Dumas	80.83	86	0	0	2	0	6	0
20	Ellennis "I" Is For Infinity CD RM RAE FDC CGCA CGCU TKI	Jennifer Bourque	79.00	82	0	0	0	1	4	0

AKC RALLY RANKINGS (Continued)

EXCELLENT

Rank	Dog Name	Primary Owner	Avg Score	High Score	1 st	2 nd	3 rd	4 th	#Qs	HIGH CM
1	Ashton's Classic Empire CD PCD BN RE FCAT2 CGCA TKI	Dana E Sikes	99.75	100	0	0	1	0	4	0
2	Lazy Days Gunpowder And Lead CDX RE AX OAJ OAP OJP NF NFP	Valery K Stevens	99.50	100	1	0	1	0	2	0
3	Ashton's Epic Ambition CD PCD BN RE FDC CAX2 FCAT2 TT CGCA TKN	Dana E Sikes	98.75	100	0	0	0	1	8	0
4	RACH Whitwind's Something Wicked This Way Comes CD PCD BN GN RM4 RAE4 FDC BCAT CGCA CGCU TKN ATT	Heather Whitaker	98.75	100	0	1	2	1	4	0
5	RACH4 Zephyr Lincoln Wolbert CDX PCDX BN RM9 RAE8 THDN CGC TKA	Stacy Jean Wolbert	97.83	100	1	2	2	6	18	0
6	RACH Lazy Days Force Awakens CDX BN RM3 RAE3 AX AXJ OF SWN SCNE CGC TKN	Shirley Spall	96.33	100	2	0	0	0	3	1
7	CH Danemark's Talk Derby To Me CD PCD BN RE FDC NJP CA DCAT ACT2 ACT2J SWME SHDN TT RATS DM DSX CGCA CGCU TKP ATT VHMA VSWE	Traci Rinoldo	96.00	100	1	1	2	1	10	1
8	GCH CH Ace-Hi's Lightning Crashes V Tolsina RE TKN	Traci Knutson	94.67	99	4	0	0	0	6	1
9	Revenir-Champlain's Bewitching Dreamweaver CD RAE CGCA CGCU TKI	Laura Amick	94.00	100	4	1	2	0	18	0
10	Lady GaGa NanPar CD BN RE CGC	Nancy Parsons	92.67	98	0	0	0	0	3	0
11	Bella Luna Blu RE AXP MJP MFP T2BP DCAT ACT2 ACT2J CGC TKA	Diana Lynne Sheatler	92.33	95	0	0	0	0	3	0
12	Faith Conquers All De Beinhart BN RAE CAA DCAT R ATO CGCA CGCU TKN	Julie Renee King	91.75	100	1	1	2	0	12	0
13	Prd's The Old That Is Strong Does Not Wither RE TKP	Dr. Christine A Fleck	91.50	97	1	3	0	0	8	0
14	Justa Sign From Heaven CD BN RAE2 CGCA CGCU TKN	Julie King	90.10	98	0	0	1	0	20	0
15	Ellenni Blackstone Thidwick The Moose RE MXP MJP3 MJPB MFP T2BP FCAT2 ACT2 CGC ATT	Deb Peatt	89.17	100	0	0	0	0	6	0
16	Patientdanes Bless The Broken Road Rascal CD PCDX BN RM DCAT CGCA CGCU TKN	Joan Mrkvicka	87.50	96	0	0	0	0	6	0
17	Lazy Days A New Hope CD BN RA CGC TKN	Shirley Spall	87.50	97	0	0	2	0	2	0
18	PACH Cara Mia Evelina CD BN RE FDC MXP4 MXPB MJP5 MJPS PAX MFPB T2BP2 FCAT2 ACT2 CGC TKA	Diana Lynne Sheatler	87.50	93	0	0	0	0	2	0
19	Dantrydanes Violets Are Blue BN RA FDC MXP2 MJP2 MJPB NFP BCAT SCN RATN TKI ATT VHMA	Faith Abend	87.00	97	2	0	0	0	2	0
20	Mr. Odis Babby CD BN RM FDC CA FCAT CGCA TKN	Ms. Danatte M Weaver	86.89	97	0	0	0	1	9	1

AKC RALLY RANKINGS (Continued)

ADVANCED

Rank	Dog Name	Primary Owner	Avg Score	High Score	1 st	2 nd	3 rd	4 th	#Qs
1	RACH4 Zephyr Lincoln Wolbert CDX PCDX BN RM9 RAE8 THDN CGC TKA	Stacy Jean Wolbert	99.26	100	2	3	2	4	19
2	RACH Whitwind's Something Wicked This Way Comes CD PCD BN GN RM4 RAE4 FDC BCAT CGCA CGCU TKN ATT	Heather Whitaker	99.00	100	1	0	1	2	4
3	RACH Lazy Days Force Awakens CDX BN RM3 RAE3 AX AXJ OF SWN SCNE CGC TKN	Shirley Spall	98.67	99	0	1	1	0	3
4	Ashton's Epic Ambition CD PCD BN RE FDC CAX2 FCAT2 TT CGCA TKN	Dana E Sikes	98.17	100	0	0	0	0	6
5	Revenir-Champlain's Bewitching Dreamweaver CD RAE CGCA CGCU TKI	Laura Amick	97.05	100	2	2	1	2	19
6	Lady GaGa NanPar CD BN RA CGC	Nancy Parsons	96.20	100	0	0	1	0	5
7	Lazy Days A New Hope CD BN RA CGC TKN	Shirley Spall	95.67	100	1	0	0	1	3
8	CH Chroma Liberty Paint The Night UD RA FDC CGCA TKN	Dina Whitehouse	95.67	99	0	0	0	0	3
8	GCH CH Ace-Hi's Lightning Crashes V Tolsina RE TKN	Traci Knutson	95.67	99	1	0	0	0	3
9	Ellenni Blackstone Thidwick The Moose RE MXP MJP3 MJPB MFP T2BP FCAT2 ACT2 CGC ATT	Deb Peatt	95.17	99	0	0	1	0	6
10	Mr. Odis Babby CD BN RM FDC CA FCAT CGCA TKN	Ms. Danatte M Weaver	94.75	100	0	2	0	1	8
11	Prd's Not All Those Who Wander Are Lost RA CGC TKA	Dr. Christine A Fleck	94.33	99	1	1	0	1	3
12	GCHB CH Nikolodeon-Kellerdns Lookin Back Into The Future CD BN RA CGC	Peggy Clark	94.33	98	0	0	1	1	3
13	Faith Conquers All De Beinhart BN RAE CAA DCAT RATO CGCA CGCU TKN	Julie Renee King	94.20	99	1	0	0	0	15
14	Justa Sign From Heaven CD BN RAE2 CGCA CGCU TKN	Julie King	93.65	100	0	1	0	0	20
15	CH Danemark's Talk Derby To Me CD PCD BN RE FDC NJP CA DCAT ACT2 ACT2J SWME SHDN TT RATS DM DSX CGCA CGCU TKP ATT VHMA VSWE	Traci Rinoldo	93.44	100	0	1	1	1	9
16	Dantrydanes Violets Are Blue BN RA FDC MXP MJP2 NFP BCAT SCN RATN TKI ATT VHMA	Faith Abend	91.00	94	0	0	1	0	3
17	Patientdanes Bless The Broken Road Rascal CD PCDX BN RM DCAT CGCA CGCU TKN	Joan Mrkvicka	90.67	98	0	0	0	0	6
18	Prd's The Old That Is Strong Does Not Wither RE TKP	Dr. Christine A Fleck	90.13	97	1	2	0	0	8
19	Fendane Honey's Golden Solae' Sadie BN RA FDC NA NAJ NAP OJP DCAT ACT2 ACT2J DM DSA AN CGCA CGCU TKP	Leslie Bokemeyer	89.33	96	0	0	0	0	3
20	Chroma Desert Wildflower CD RA CGCA TKN	Dina Whitehouse	89.00	96	0	0	0	0	3

AKC RALLY RANKINGS (Continued)

INTERMEDIATE

Rank	Dog Name	Primary Owner	Avg Score	High Score	1 st	2 nd	3 rd	4 th	#Qs
1	Kc's D Plus Evil At Whitwind RI FDC CA BCAT CGCA CGCU TKN ATT	Heather Whitaker	99.50	100	4	0	0	0	4
2	Ashton's Classic Empire CD PCD BN RA FCAT CGCA TKI	Dana E Sikes	98.00	100	1	3	0	0	4
3	Nicosia's Molly RI FDC CAA FCAT CGCA CGCU TKA ATT	Marissa Nicosia	97.67	99	0	3	0	0	3
4	GCH CH Dantrydanes Ramsey RI FDC NJP NFP BCAT ACT2J SCN SBN CGC TKI ATT VHMA	Faith Abend	95.50	99	2	0	0	0	2
5	Dp-Kma-Crystallynn Beach Please CD RI	Campbell Amick	95.40	99	0	3	1	1	5
6	CH Wil-Joi It's Miller Time At Twin Oaks -V Wildwind BN RN BCAT CGC TKA	Laurie Lutton	94.50	99	0	0	1	0	2
7	Prd's Not All Those Who Wander Are Lost RI CGC TKA	Dr. Christine A Fleck	89.25	92	1	2	1	0	4
8	Davisdane's Quacker Jack RN TKN	Susan D Shaw	87.50	94	0	0	0	0	2
9	GCHB CH Nikolodeon-Kellerdns Lookin Back Into The Future CD BN RI CGC	Peggy Clark	87.33	99	1	1	1	0	3
10	CH Tered-Dbm's Midnight Moonshine RI	Terri Burley-Hammond D.V.M.	87.25	95	0	2	0	0	4
11	Divines Harlem Shake RI CGCA CGCU TKN	Laur Curry	85.00	97	1	0	1	1	3
12	Dancing With Danes Riddick Lucius BN RI CGCA TKN	Mrs. Lisa Ann Mason	85.00	89	0	0	0	0	2
13	Pacific Blue's Blazin' Boomer BN RI BCAT CGCA TKN ATT	Shinae Perry	84.00	85	0	0	0	1	2
14	Calvadas Apes Follow Koba Now RI CGC	Melissa Jennings	82.00	93	0	2	1	0	4
15	CH Fendanesylcrest Going With The Flow RI BCAT DJ TKA ATT VHMA	Leslie Bokemeyer	81.00	86	0	0	0	1	2
16	Fox Tale's Take The Money And Run RI FDC CGCA CGCU TKN ATT VHMA FITB	Kara Lyn Berry	80.00	86	0	0	0	0	3
17	CH Chanoz You Are Loved BN RN CGC TKN	Lori Beilke	79.00	84	0	0	0	0	2
18	CH Lobato's Action Jackson RI	Joy P Lobato	78.33	83	1	0	1	0	3
19	CH Old-Missions Danemarks High Inspirations BN RI CGCA TKA	Gabriella Ann Beilke	76.00	79	0	0	0	0	2
20	CH Gdab Oingo Boingo BN RN CGCA CGCU TKN	Crystal Anne Reid	73.50	76	0	0	0	0	2

AKC RALLY RANKINGS (Continued)

NOVICE

Rank	Dog Name	Primary Owner	Avg Score	High Score	1 st	2 nd	3 rd	4 th	#Qs
1	River Rock's God Of War RN	Stacy J Wolbert	99.75	100	2	0	1	0	4
2	Hoosier Danes Made In America RN	Stacey Stovall	99.33	100	0	1	0	2	3
3	Elle's Legally Blonde RN BCAT CGC	Patrina Odette	99.00	100	3	0	0	0	3
4	Kc's D Plus Evil At Whitwind RI FDC CA BCAT CGCA CGCU TKN ATT	Heather Whitaker	99.00	100	2	0	0	0	2
5	GCH CH Smokin' Hot's Bright Light RN	Sandra Ewing	98.00	100	1	0	0	0	3
6	Una La Noonyah Petunia	Ashley S O'Neill	98.00	100	1	0	1	0	2
7	Lazy Days Sabbath Lord Of This World BN RN CGCA CGCU TKN	Zana M Vernon	97.60	99	0	0	0	3	5
8	Sterling's Bluebonnet V Krw RN	Sterling Moffat	95.75	100	2	1	0	0	4
9	Chroma Desert Wildflower CD RN CGCA TKN	Dina Whitehouse	95.33	97	0	0	0	0	3
10	GCH CH Sanlor's Come Away With Me CGC	Sandra Mauck	95.00	96	0	0	0	2	2
11	Saravilla's Mystical Druidess RN	Susan Robinson	94.75	99	0	2	1	1	4
12	Liberty's Chroma Keepsake RN FDC CGC TKN	Dina Whitehouse	94.67	98	0	0	0	0	3
13	Dulce Whiskey B'Fore Breakfast At Tranquility DCAT CGC TKN	Nancy Snyder	94.50	100	1	1	0	0	2
14	GCH CH Ellenni Blkstn 26 Degrees Fool Sweet @ Timberline RN FDC BCAT RATN CGCA TKN	Jessica Gibbs	94.33	96	0	3	0	0	3
15	CH Griner's Call Me Mr. Fahrenheit RN FDC CGCA CGCU TKP VHMA	Marilyn Marie Pence	94.00	97	0	0	0	0	2
16	Willow Hills Chantilly Lace RN CGC	Fay A Holbay	93.50	97	2	0	0	0	2
17	GCHG CH Stardust's King Of Late Night RN FDC	Darryl Pitts	93.33	98	2	0	0	0	3
18	CH Anandane's Com'N Around Again 2 Nikolodeon-Kelrdns CGC	Peggy Clark	93.00	98	0	0	0	1	2
19	GCHB CH Ellenni Blkstone Ashella True Friend Of The Crown BN RN FDC NAP NJP NFP CAX FCAT6 ACT2 THDX CGCA CGCU TKI ATT	Lenni Brett Cipriotti	91.67	96	1	1	0	0	3
20	Anandane's Paski Z Nieba Dobry BN FDC CGCA TKI	Melissa Hernly-Zuk	91.50	94	0	0	1	0	2

Current Breed Standings for 2023 Show Year*For Events Processed from January 1, 2023 through April 20, 2023*

Rank	Name	Sex	BOB Wins	Total Defeated
1	GCHS CH Longo Lore N Vandelft's Superstition	B	27	929
2	GCHS CH Eb The Relentless Pursuit of Perfection	D	36	889
3	GCHS CH Old Mission's Lemaire's Know When To Hold 'Em	D	12	517
4	GCHB CH Shalako N Rkyerk's Mo Cridhe's Outlander V Oly-Pac	D	17	410
5	GCHS CH Jerdans Country Girl Of Eden Forest	B	17	335
6	GCHB CH Legado N Danemark's I Was Born A B!Tch BCAT	B	14	268
7	GCHP CH Cosmic Nobonz New Kid In Town	D	21	268
8	GCHS CH Fendanesylcrest N Diriso's This Is The Right Time	D	10	184
9	GCHG CH Stardust's King Of Late Night RN FDC	D	8	180
10	GCHB CH Laurado's 'N Sobeit's Warship On The Horizon	D	14	149
11	GCHB CH Nor'East's Black Panther	D	7	138
12	GCHS CH Antigua & Asbury Royale Dementor BCAT CGC TKN	B	3	127
13	GCHB CH Windycity Dane D'Coer's Gabrielle	B	10	121
14	GCH CH Sanlor's Come Away With Me CGC	B	9	94
15	GCHB CH Dulce N Sum-Dane's Rock U Like A Hurricane	B	5	94
16	GCHB CH Great View's Mighty Tradewinds Maui	D	9	84
17	GCH CH Elle's Paint The Town Red	B	5	77
18	GCH CH Daynakin's Just A Little Bit Country At Hamlin	D	5	69
19	GCHB CH Droghedas Splash Of Gold Kiani	B	6	66
20	GCH CH Solara's Maybe Later Clark	B	1	65

Reported By: GDCA Top 20 Statistician
Rita K Suddarth • 122 Virginia Avenue • Bowling Green • VA 22427
(703) 501-9004 • daneworld94@gmail.com
For the Great Dane Club of America

Current Group Standings for 2023 Show Year

For Events Processed from January 1, 2023 through April 20, 2023

Rank	Name	Sex	BIS	I	II	III	IV	BOB Wins	Total Defeated
1	GCHS CH Eb The Relentless Pursuit Of Perfection	D	4	15	6	3	0	36	6,970
2	GCHS CH Longo Lore N Vandelft's Superstition	B	0	1	1	1	1	27	1,504
3	GCHP CH Cosmic Nobonz New Kid In Town	D	0	3	3	1	1	21	1,161
4	GCHS CH Jerdans Country Girl Of Eden Forest	B	0	0	4	0	1	17	994
5	GCHB CH Legado N Danemark's I Was Born A B!Tch BCAT	B	0	1	1	2	1	14	634
6	GCHB CH Shalako N Rkyerk's Mo Cridhe's Outlander V Oly-Pac	D	0	0	1	0	1	17	624
7	GCHS CH Old Mission's Lemaire's Know When To Hold 'Em	D	0	0	0	0	0	12	517
8	GCHG CH Yarmb Misty of Rondomar	B	0	1	0	0	1	4	441
9	GCHS CH Fendanesylcrest N Diriso's This Is The Right Time	D	0	0	1	2	0	10	397
10	GCHS CH Shades Tapestry Of Stetson Ty Silver Linings	B	0	0	2	1	1	4	352
11	GCHB CH Laurado's 'N Sobeit's Warship On The Horizon	D	0	0	1	0	1	14	319
12	CH Paquestone's Nola Cajun Queen	B	0	1	0	0	0	1	318
13	GCH CH Elle's Paint The Town Red	B	0	0	3	0	0	5	285
14	GCHB CH Great View's Mighty Tradewinds Maui	D	0	0	0	2	0	9	264
15	GCHG CH Stardust's King Of Late Night RN FDC	D	0	0	0	1	0	8	262
16	GCH CH Daynakin's Just A Bit Country At Hamlin	D	0	0	1	0	0	5	194
17	GCHB CH Dulce N Sum-Dane's Rock U Like A Hurricane	B	0	0	1	0	0	5	185
18	GCH CH Dun Roman's Just Like You Only Prettier	B	0	0	0	0	1	2	184
19	GCH CH Sanlor's Come Away With Me CGC	B	0	0	0	0	1	9	177
20	GCHS CH Antigua & Asbury Royale Dementor BCAT CGC TKN	B	0	0	0	1	0	3	169

Reported By: GDCA Top 20 Statistician
Rita K Suddarth • 122 Virginia Avenue • Bowling Green • VA 22427
(703) 501-9004 • daneworld94@gmail.com
For the Great Dane Club of America

*In MEMORY of Merle Crow
Great Dane Club of Hawaii (GDCH)*

It is with great sadness that GDCH shares the news of the passing on February 10, 2023, of Merle Crow at age 94. Husband of 70 years to Doris Crow, who has been a member of GDCH and GDCA for nearly 50 years, Merle was, arguably, the biggest fan of the breed in his family. Although it was one of his daughters, 7 years old at the time, who wrapped her arms around the neck of a Great Dane bitch at a dog show held on the grounds of her school, she wasn't the only one of the Crow family smitten. Soon thereafter, the Crows bought AKC-registered puppy Sam, the first of fourteen Great Danes they would eventually own and love. In 1976, with Merle's support, Doris entered and showed their KAI-DANE male puppy (bred by Susan Cates and Carol Gillis) in the very first GDCH specialty show. Doris also attended the first GDCA National show, held in Maryland, and since then has missed only a few Great Dane National Specialties. Those great events were often the centerpiece of Merle and Doris' many travels from Hawaii to far-off locations around the world.

Merle was born in Pontiac, Illinois and he and Doris both graduated from Bradley University in Peoria. After his service in the U.S. Army—and tired of the Midwest cold—Merle moved with Doris to Hawaii in 1956. He earned his CPA certificate from the then Territory of Hawaii and spent his professional career with KPMG and its predecessors, working primarily in Hawaii but also in Guam to help establish the firm's



practice there in the early 1960s. His love of travel led him to visit many countries on six continents (he only missed Antarctica—again, too cold). He was the primary dog walker of the family, and Merle's image—a very tall man walking a very big dog, a male Great Dane—was a common sight in the Kahala community of Honolulu that was home to the Crow family. Merle was a beloved husband, father of two daughters, grandfather of three grandchildren, and pal to the family's fourteenth Great Dane, Freddie, who was his faithful companion to the end.



When asked by GDCH members if donations to GDCA in Merle's name would be appropriate, Doris responded, "Donations to the National Club would be great." She said Merle "had a great love for all of their Danes" and by supporting her in all of her GDCA activities, "he was supporting the Club."

Breed Mentor Report
GDCA May 2023 Newsletter

Helping Our Own

I wish to remind our affiliate clubs that they would be doing our breed a service if they were to arrange for ringside mentoring at their Specialties. Many of our clubs are doing so and it can only help to educate those that, in the future, will be judging our Danes.

We continue to get more GDCA members who wish to become breeder judges having their names added to the Helping Our Own list. Many of our Dane clubs are now using this list to select their Sweepstakes judges. We encourage all of you to do so. In the last couple of weeks I have added two more names to the list.

I want to welcome Joy Degruccio to our family of GDCA Breed Mentors. She is certain to be a great addition to our ranks.

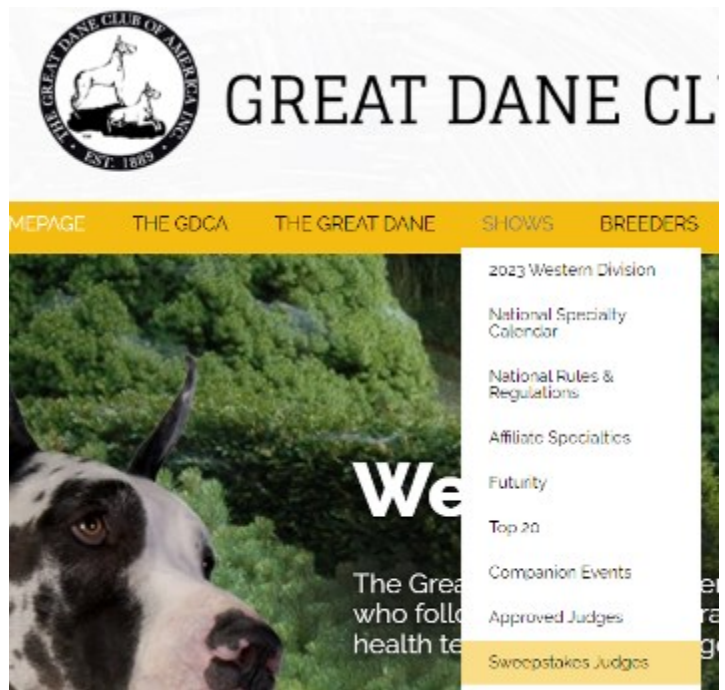
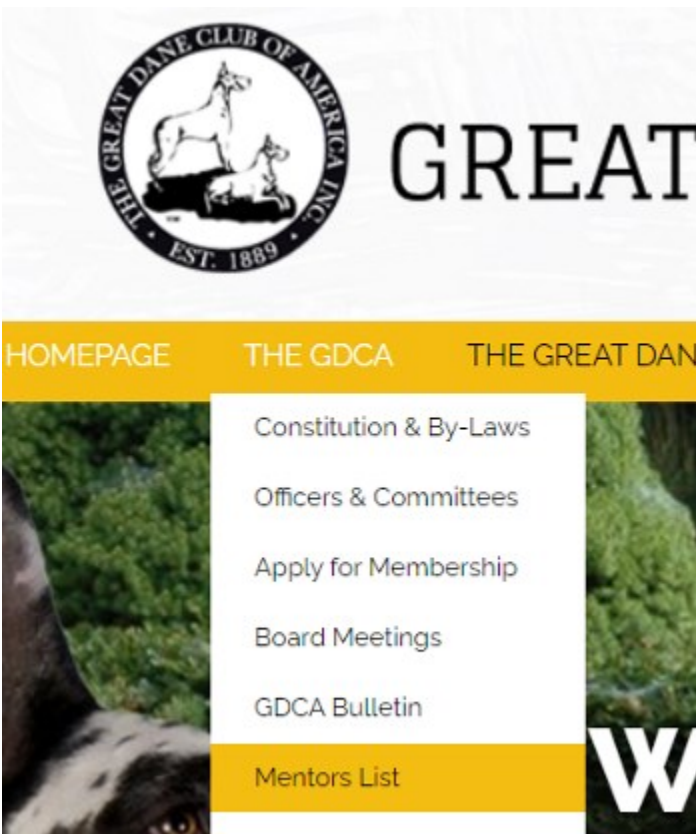
To access this list, go to the GDCA home page and click on the column heading SHOWS. On the pop-up menu, click on Sweepstakes Judges.

If any of you are interested in getting information on becoming a breed mentor, please contact me at cherdane2@comcast.net.

If you wish to have your name added to the list, please contact me at cherdane2@comcast.net.

Bill Stebbins

Bill Stebbins



QUARTERLY CHIC REPORT*Denise Matulich*

Canine Health Information Center (CHIC) - Parent Club Reporting:
Great Dane Club of America. CHIC Numbers Issued or Updated: Q1
2023. Find out more about OFA's CHIC program here:
www.caninehealthinfo.org/rdreqs

Dog: ARBORHILLS HUNK A BURNING LOVE**Owner:** LINDA WELSH**AKC #:** WS52710706**CHIC #:** 133109**New or Update:** UPDATE**CHIC Date:** 2/10/2023**GDCA:** NO**Dog:** ISABELLA ARTY**Owner:** DANIELLE KROSCHEL**AKC #:** WS54082109**CHIC #:** 135983**New or Update:** UPDATE**CHIC Date:** 3/8/2023**GDCA:** NO**Dog:** ARBORHILLS DREAM WITH A V8 ENGINE**Owner:** DEREK LEACH**AKC #:** WS52710701**CHIC #:** 140802**New or Update:** UPDATE**CHIC Date:** 3/1/2023**GDCA:** YES**Dog:** DANU'S SINFUL TEMPTATION FOR TDT**Owner:** TABITHA PLAMBECK**AKC #:** WS52457902**CHIC #:** 144479**New or Update:** UPDATE**CHIC Date:** 3/13/2023**GDCA:** YES**Dog:** DUNDANE N KMA PLAYIN IT HIGH & MIGHTY**Owner:** SHEILA NELSON-HENSLEY**AKC #:** WS60194508**CHIC #:** 151014**New or Update:** UPDATE**CHIC Date:** 1/5/2023**GDCA:** NO**Dog:** DANU'S SPLITTING ATOMS**Owner:** TABITHA PLAMBECK**AKC #:** WS62161202**CHIC #:** 159193**New or Update:** UPDATE**CHIC Date:** 3/13/2023**GDCA:** YES**Dog:** NORTHERNAIRE'S GUNPOWDER & LACE**Owner:** CATHY BRACHT**AKC #:** WS67963301**CHIC #:** 177839**New or Update:** NEW**CHIC Date:** 1/5/2023**GDCA:** YES**Dog:** GLORY'S GOT MY MOJO WORKING**Owner:** HEATHER SILAS**AKC #:** WS71031801**CHIC #:** 178053**New or Update:** NEW**CHIC Date:** 1/13/2023**GDCA:** NO**Dog:** REMINGTON'S LOYAL GO BIG BLUE**Owner:** ALICE EMBERTON-FEAZELL**AKC #:** WS8215005**CHIC #:** 178152**New or Update:** NEW**CHIC Date:** 1/16/2023**GDCA:** NO**Dog:** LONGOMILLEREVEAFTER WHISPER
THROUGH THE GRAPEVINE**Owner:** RUTH GREENE**AKC #:** WS69952404**CHIC #:** 178186**New or Update:** NEW**CHIC Date:** 1/17/2023**GDCA:** YES**Dog:** PCH GO BEEP GO**Owner:** SUZZANE KELLEHER**AKC #:** WS59194405**CHIC #:** 178289**New or Update:** NEW**CHIC Date:** 1/20/2023**GDCA:** YES**Dog:** COKIE'S LOVE SNEAKIN' UP ON YOU V COQUINA**Owner:** ALICE CAROL MOSHER**AKC #:** WS69442405**CHIC #:** 178290**New or Update:** NEW**CHIC Date:** 1/20/2023**GDCA:** YES

Dog: MGIS MAKE SOME NOISE ECHO DI STELLA
ALHENA
Owner: RACHEL BRUBAKER
AKC #: WS72602801
CHIC #: 178291
New or Update: NEW
CHIC Date: 1/20/2023
GDCA: NO

Dog: WINDYCITY SECRET'S OUT AT OWL RIDGE
Owner: JUDI ARSENAULT
AKC #: WS68942007
CHIC #: 178452
New or Update: NEW
CHIC Date: 1/24/2023
GDCA: YES

**Dog: LONGO MILLER EVERAFTER'S SHADOWS OF A
RUNE**
Owner: AMBER FINKEL
AKC #: WS66422401
CHIC #: 178529
New or Update: NEW
CHIC Date: 1/26/2023
GDCA: YES

**Dog: LONGO MILLER EVERAFTER'S YOU KNOW YOU
LOVE ME**
Owner: AMBER FINKEL
AKC #: WS69952401
CHIC #: 178530
New or Update: NEW
CHIC Date: 1/26/2023
GDCA: YES

Dog: ELLENI'S CROSSING THE RUBICON
Owner: LB CIPRIOTTI
AKC #: WS69893302
CHIC #: 178595
New or Update: NEW
CHIC Date: 1/30/2023
GDCA: YES

Dog: DGD MADAME MAXIME-HEADMISTRESS OF THE
GREAT LAKES
Owner: KAITLYN KOBOS
AKC #: WS72964511
CHIC #: 178596
New or Update: NEW
CHIC Date: 1/30/2023
GDCA: NO

Dog: MCEMN-DANEKRAAFT DANCING FOR MY FATHER
Owner: ROBERT CLARKE
AKC #: WS65255101
CHIC #: 178692
New or Update: NEW
CHIC Date: 2/1/2023
GDCA: NO

Dog: MEDIC
Owner: ANGELA YOUNG
AKC #: WS70517605
CHIC #: 178693
New or Update: NEW
CHIC Date: 2/1/2023
GDCA: NO

Dog: COUNTRY DANES SOMETHING IN THE ORANGE
Owner: KAYLA ALTMAN
AKC #: WS70765209
CHIC #: 178694
New or Update: NEW
CHIC Date: 2/1/2023
GDCA: NO

Dog: BAYSIDE'S BUTTERCUP
Owner: GARY KETTRING
AKC #: WS60331801
CHIC #: 178803
New or Update: NEW
CHIC Date: 2/2/2023
GDCA: YES

Dog: H & S WALK OF FAME ON BROADWAY
Owner: JOSEE MAURICE
AKC #: GG4001114
CHIC #: 178804
New or Update: NEW
CHIC Date: 2/2/2023
GDCA: NO

Dog: H&S LEAN ON FOR A KISS AT GDG
Owner: JOSEE MAURICE
AKC #: GS4126184
CHIC #: 178805
New or Update: NEW
CHIC Date: 2/2/2023
GDCA: NO

Dog: ICON'S I'M THE CATS MEOW**Owner: JAMIE HARSHFIELD****AKC #: WS70155702****CHIC #: 178896****New or Update: NEW****CHIC Date: 2/6/2023****GDCA: YES****Dog: VALKKAS IRISH EYES ARE SMILING AT KELTIC****Owner: KELLY BOYLES****AKC #: WS66182301****CHIC #: 179098****New or Update: NEW****CHIC Date: 2/10/2023****GDCA: NO****Dog: RBD DRR SMOOTH AS TENNESSEE WHISKEY****Owner: NATOSHA BERG****AKC #: WS71214701****CHIC #: 179099****New or Update: NEW****CHIC Date: 2/20/2023****GDCA: YES****Dog: D&M'S CAROLINAS KING DIESEL****Owner: MIRANDA SMITH****AKC #: WS60688506****CHIC #: 179214****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: NO****Dog: ALPINE DISCO I DONT CARE IF IM WRONG OR RIGHT****Owner: JASON SCOTT****AKC #: WS64668601****CHIC #: 179215****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: YES****Dog: ALPINE'S CAN YOU SEE HER SHINE****Owner: JASON SCOTT****AKC #: WS68022701****CHIC #: 179216****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: YES****Dog: ALPINE'S DON'T YOU WANT TO BE HAPPY****Owner: JASON SCOTT****AKC #: WS65741101****CHIC #: 179217****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: YES****Dog: JAYS ROUND AND ROUND V CAROUSEL****Owner: AMANDA TEBAULT****AKC #: WS70386602****CHIC #: 179218****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: NO****Dog: WINDY HILL'S SOUTHERN PERFECTION V MOONRIVER****Owner: LAURIE G SHRAWDER****AKC #: WS70027406****CHIC #: 179219****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: NO****Dog: ALL-IN'S LOOK UP TO THE STARS****Owner: JENNIFER DENICK****AKC #: WS70790707****CHIC #: 179220****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: NO****Dog: ALL-IN'S RIPPLIN' WATERS****Owner: JENNIFER DENICK****AKC #: WS70790709****CHIC #: 179221****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: NO****Dog: DAYNAKIN'S I ONLY HAVE EYES FOR YOU****Owner: GEORGIA HYMMEN****AKC #: WS70016503****CHIC #: 179222****New or Update: NEW****CHIC Date: 2/14/2023****GDCA: YES**

Dog: MOONRIVER'S DREAM A LITTLE DREAM WITH ME
V LACV
Owner: ARRETTA EGGLESTON
AKC #: WS71615403
CHIC #: 179306
New or Update: NEW
CHIC Date: 2/15/2023
GDCA: NO

Dog: QUIET STORM
Owner: KEN WILLIAMS
AKC #: 5638-B
CHIC #: 179307
New or Update: NEW
CHIC Date: 2/15/2023
GDCA: NO

Dog: NOR'EAST'S BLACK PANTHER
Owner: DIANNE POWERS
AKC #: WS71674501
CHIC #: 179866
New or Update: NEW
CHIC Date: 2/21/2023
GDCA: YES

Dog: LIBERTY'S VIDOGO FARASI
Owner: JOYCE GUTHRIE
AKC #: WS64096701
CHIC #: 180481
New or Update: NEW
CHIC Date: 3/17/2023
GDCA: YES

Dog: LAURADO'S 'N SOBEIT'S RELEASE THE KRAKEN
Owner: BARB BREUER
AKC #: WS73827502
CHIC #: 180585
New or Update: NEW
CHIC Date: 3/1/2023
GDCA: NO

Dog: DIVINE ACRES SASMAC VZTOP CELEBRATION
Owner: CATHY ALLEN
AKC #: WS68300305
CHIC #: 180586
New or Update: NEW
CHIC Date: 3/1/2023
GDCA: YES

Dog: NAPLES SANROQUE FOREVER IN THE BLACK
SHEVA PHI
Owner: MARION PHIPPS
AKC #: WS68162102
CHIC #: 180880
New or Update: NEW
CHIC Date: 3/8/2023
GDCA: NO

Dog: ELIOT BLAZE
Owner: CASSANDRA SMITH
AKC #: WS62176808
CHIC #: 180961
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: NO

Dog: NORTHERNAIRE'S GOOD OLD TIMES
Owner: CATHY BRACHT
AKC #: WS67587004
CHIC #: 180962
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: YES

Dog: CASTLE CREEK N RAEDON'S ONE HOT MESS
Owner: MICHELE NEFF
AKC #: WS6890503
CHIC #: 180963
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: YES

Dog: DANEKRAAFTS DON'T STOP ME NOW AT
NORTHERNAIRE
Owner: CATHY BRACHT
AKC #: WS70556605
CHIC #: 180964
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: YES

Dog: NORTHERNAIRE'S CAN I SPEAK TO YOUR
MANAGER
Owner: CATHY BRACHT
AKC #: WS70754304
CHIC #: 180965
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: YES

Dog: NORTHERNAIRE'S M & M I'M THE SEXY ONE
Owner: CATHY BRACHT
AKC #: WS70538801
CHIC #: 180966
New or Update: NEW
CHIC Date: 3/13/2023
GDCA: YES

Dog: SIMKO DANES GERTRUDE'S "GERTIE" LITTLE SECRET
Owner: CHEZARAE SIMKOWSKI
AKC #: WS69173701
CHIC #: 181157
New or Update: NEW
CHIC Date: 3/16/2023
GDCA: NO

Dog: AGD'S CELTCI KING KEEVA
Owner: ANDREA ALDRICH
AKC #: WS73164309
CHIC #: 181158
New or Update: NEW
CHIC Date: 3/16/2023
GDCA: NO

Dog: ADA VI
Owner: DEREK PHILLIPS
AKC #: WS66670701
CHIC #: 181256
New or Update: NEW
CHIC Date: 3/17/2023
GDCA: NO

Dog: DAVISDANE'S QUACKER JACK
Owner: SUSAN SHAW
AKC #: WS65627901
CHIC #: 181339
New or Update: NEW
CHIC Date: 3/22/2023
GDCA: YES

Dog: LEGADO N DANEKRAAFT'S HOW CAN I TELL YOU?
Owner: KAREN MAYFIELD-JONES
AKC #: WS69691106
CHIC #: 181340
New or Update: NEW
CHIC Date: 3/22/2023
GDCA: NO

Dog: ARGO'S LITTLE LADY LILLIPUTIAN
Owner: BECCA MAUSER
AKC #: WS71613802
CHIC #: 181341
New or Update: NEW
CHIC Date: 3/22/2023
GDCA: NO

Dog: MONARCHS APEX LEGEND OF ZEKE
Owner: TRISHA MCGILLEN
AKC #: WS73699505
CHIC #: 181441
New or Update: NEW
CHIC Date: 3/23/2023
GDCA: NO

Dog: DANU'S SWEET SERENDIPITOUS FATE
Owner: MELISSA PEVY
AKC #: WS69829603
CHIC #: 181532
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: YES

Dog: EDEN FORESTS CASSIQUE V JERDANS
Owner: GENE PERRY
AKC #: WS69030001
CHIC #: 181533
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: NO

Dog: SONYA DANES NKC DANES RHEIA MAY BELL
Owner: JOY L GAMMAGE
AKC #: WS70681405
CHIC #: 181534
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: NO

Dog: PEBBLE MURPHY
Owner: DAYSHA BROADWAY
AKC #: WS73879302
CHIC #: 181535
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: NO

Dog: SIMKO DANES IF YOU "MILLIE" KNEW ME,
MILDRED
Owner: CHEZARAE SIMKOWSKI
AKC #: WS71047804
CHIC #: 181536
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: NO

Dog: LIBERTY'S CHROMA
YOUMAKEMYDREAMSCOMETRUE @ EVNSTAR
Owner: SARAH MOREHEAD
AKC #: WS71697701
CHIC #: 181537
New or Update: NEW
CHIC Date: 3/28/2023
GDCA: NO

Dog: RANA'S SHADOW OF THE SCOTTISH MOON
Owner: DANA G. ALBRECHT
AKC #: WS69269101
CHIC #: 181720
New or Update: NEW
CHIC Date: 3/30/2023
GDCA: YES

Dog: POWERS STAND BY ME VON LYRIC
Owner: MACKENZIE POWERS
AKC #: WS68045001
CHIC #: 181721
New or Update: NEW
CHIC Date: 3/30/2023
GDCA: NO

64 new or updated dogs.

GDCA BOARD MINUTES APRIL 22, 2023**MOTIONS**

Motion: To excuse the absence of Joy Lobato

Moved: Denise Matulich

Second: Linda Cain

Passed: Unanimous

Motion: To go into Executive Session at 9:07

Moved: Nancy Ridgway

Second: Joyce Rowe

Passed: Unanimous

Motion: To go out of Executive Session at 10:03

Moved: Joyce Rowe

Second: Linda Cain

Passed: Unanimous

Motion: To approve the following applicants for membership in the GDCA: Kenneth and Janine Muzzles, Russell Martin, and Lisa Cohen, Christine Buck, Brian and Wendy O'Donnell, Zane Vernon, Karen Pacino, Sarah Hughes, and Carrie Lawrence.

Moved: Joyce Rowe

Second: Linda Cain

Passed: Unanimous

Motion: To approve the following applicant for membership in the GDCA: Cynthia Neet

Passed: 2/3 Majority

Motion: To approve the following appointments for Standing Committee Chairs by Jamie Harshfield, President. They are:

- Advisory Board (3 past presidents) Jason Hoke, Linda Tonnancour, & David Miller
- Awards: Margaret Ontl
- Companion Events: Tracy Powell
- Constitution & Bylaws: Nancy Ridgway
- Futurity: Kathy Baraga
- Health & Research: Darryl Pitts
- Judges Education Chairs: Jason Hoke, Robert Edison, Dale Tarbox, Jane Treiber, & Tracy Powell
- Junior Showmanship: Tristen Lawrence
- Membership: Lynda Moriarty
- Rescue: Kathy Shea (Admin), Mary Barnett, Brittany Dail, & Sandie Elliott
- Standard: Sharon Fullford-Fint
- Website: Melissa Ekis

Special Committees:

- Breeder' Education: Cindy Harwin

- Breeder Referral: Michelle Conroy
- Breeders Mentors: Bill Stebbins
- Bulletin: Kennedy Morgan
- Charitable Trust Liaison: Jim Remakulus
- Sponsorships: Debi Romerosa
- Historian: Chantal Le Cheval
- Ethics Committee Chair: Tracy Powell
- AKC Delegate: Jean Highlands
- Membership Health & Welfare: Lisa Barrett
- National Trophy Chairperson: Jean Dinkins
- Top 20 Production Chair: Karen Desjardins
- Top 20 Statistician: Rita Suddarth
- Top 20 National Chair: Memory Armstrong

Committees to be Determined: National Specialty Coordinator, Public Education

Moved: Darryl Pitts

Second: Nancy Ridgway

Motion: To approve Jason Hoke as Director of the GDCA replacing Mari Hayhurst

Moved: Karen Desjardins

Second: Mary Lee Williams

Motion: To approve the minutes from the January meeting pending the addition of comments received on the minutes review

Moved: Nancy Ridgway

Second: Linda Cain

Passed: Unanimous

Motion: To approve the late payments of Russel and Joan Lewis, Kathy Munch, and Pat Champ for dues in the GDCA

Moved: Jason Hoke

Second: Karen Desjardins

Passed: Unanimous

Motion: To approve the Treasurer's Report as presented

Moved: Denise Matulich

Second: Nancy Ridgway

Passed: Unanimous

Motion: To approve the contract for GDCA National Official Photographer starting in 2025.

Moved: Jason Hoke

Second: Mary Lee Williams

Passed: Unanimous

National Specialty Rules and Regulations were reviewed and updated the Board of Directors.

Motion: To approve the revised National Specialty Rules

Moved: Joyce Rowe
Second: Darryl Pitts
Passed: Unanimous

Motion: To approve the Judges Education Job Description

Moved: Karen Desjardins
Second: Lisa Barrett
1 abstention 13 Yea

Motion: To go into Executive Session at 3:30
Moved: Nancy Ridgway

Motion: To go out of Executive Session at 4:45
Moved: Nancy Ridgway

Motion: All Divisions must adhere to the selection process of Nominations for Division Officers and Division Reps. No nominations have been made and must use the approved form and procedures to be nominated

Moved: Jason Hoke
Second: Mary Lee Williams

Motion: To adjourn
Moved: Jason Hoke

Bulletin Chair: Kennedy Morgan
apachevegasrose@gmail.com

Submission for Bulletin due by May 8, 2023

**GDCA BOARD MOTIONS TELECONFERENCE
MAY 2, 2023
MOTIONS**

The teleconference was begun at 5:30 pm May 2, 2023

Motion: To approve the acceptance of the late dues of Terry and Isabelle Troy received on the 4/24/2023.

Moved:
Second:
Passed: Unanimous

Motion: To approve the reimbursement of expenses for the site visit to the Hotel and Convention Center located in Topeka, KS for next year’s National. Jamie, Jason, and Kathy will be going. The expenses would be divided Half and Half with the division.

Moved: Nancy Ridgway
Second: Lisa Barrett
Passed: Unanimous

Revise the Futurity nomination form to ask if they are MEMBER OF AN AFFILIATE CLUB OF THE GDCA or a GDCA member as the procedure to approve vetting applicants for Futurity Nominations.

Motion: To approve the Nominating Chair Mary Lee Williams

Moved:Karen
Second: Darryl Pitts
Passed: Unanimous

Motion: To adjourn
Moved: Jason Hoke

Respectfully submitted,

Lucinda Harwin

GDCA BOARD MEETINGS FOR 2023

July 29, 2023: Milwaukee

Letters concerning the approval or disapproval of applicants should be directed in writing to:

Lynda Moriarty
4496 Gosey Hill Road
Franklin, TN 37064

The following applicants have been approved by the Membership Committee for publication in the GDCA Bulletin. The Membership Chairman must receive comments concerning these applicants during the forty-five (45) day period following publication.

Any comments received after **July 10, 2023** will not be accepted.

Arretta J Eggleston
534 St. Croix Trail N
Lakeland, MN 55043
651-436-7088
egglestonarretta@hotmail.com
Sponsors: Fay Rogstad & T Lynn Adams
Interests: Awards, Bulletin, Fundraising

Stephanie Kelley
430 Riverside Drive
Crystal Lake, IL 60014
847-406-8559
stephkelly@yahoo.com
Sponsors: Bev Klingensmith & Lynda Moriarty
Interests: Fundraising, Membership, Rescue

Rebecca Ann Fuller (Junior Member)
12 Ireland Road
Wethersfield, CT 06109
860-990-7276
americasdanes@yahoo.com
Sponsors: Pat Ciampa & Tiffany Cross
Interests: Junior Showmanship

Applications are gathered on a quarterly basis. Deadlines are as follows:

- July 1, 2023
- October 1, 2023
- January 1, 2024
- April 1, 2024

Completed applications received prior to these dates will move forward at that quarter's board meeting. Those received after the deadline will be held for the next quarter's board meeting.

NOTE: There is an updated application on the GDCA website and sent via constant contact. Sponsors—be certain the applicant you are sponsoring is using the correct form. The 'July 2020' version is the only version that will be accepted. Any applications received on the old form will be returned.

***** NEW *****

There is now an auto-renewal option to pay GDCA dues. Go to GDCA.ORG > GDCA Store > GDCA Dues-Auto Renewal Option for existing members.

The Board of Directors approved the following for membership. We welcome them to the GDCA!

Kenneth & Jenine Mezzles

13735 Meadowick Drive

San Antonio, TX 78253

979-324-8913

Jmezzles1126@gmail.com

Sponsors: Beverly Ballard & Cathy Allen

Interests: Futurity, Awards, Membership

Russell Martin & Lisa Cohen

4601 E. Wild Horse Lane

Boise, ID 83712

310-871-9654

lisaacohen@gmail.com

Sponsors: Jamie Harshfield & Georgia Hymmen

Interests: Rescue, 2023 National

Christine Buck

34 Ovington Drive

Yardville, NJ 08620

609-519-5557

Cbuck1020@hotmail.com

Sponsors: Tracey Powell & Lisa Barratt

Interests: Fundraising, Health & Research, Performance Rescue

Brian & Wendy O'Donnell

7 Ono Road

Palmetto GA 30268

770-310-3774

Brian.p.odonnell71@gmail.com

Sponsors: Jamie Harshfield & Darryl Pitts

Interests: Awards, Futurity, Junior Showmanship

Zana Vernon

5710 Oak Lane

Lockport, NY 14094

716-697-7626

zmorovernon@aol.com

Sponsors: Mona Brown & Gayle Smith

Interests: Performance

Karen Pacino

22 Planet Street

Roslindale MA 02131

857-829-1345

nobonz@hotmail.com

Sponsors: Sandy Tombari & Tami Bradford

Interests: Futurity & Junior Showmanship

Cynthia Neet

1119 S. Mission Road #354

Fallbrook CA 92028

760-702-2440

Cynthia@neetdanes.com

Sponsors: Nancy Ridgway & Allison Paxon

Interests: Awards, Breeders' Ed, Finance, By-Laws, Futurity, GDCA Website, Health & Research Judges' Ed, Legislation, Membership, Public Ed, Rescue & Standard

Sarah Hughes

737 Highland Park

Fallbrook CA 92028

443-417-6709

goldenrulesdanes@yahoo.com

Sponsors: Joyce Rowe & John Neet

Interests: Awards, Fundraising, Futurity, Membership, Public Education, Performance, Rescue

Carrie Lawrence

4231 Balboa Ave

Sand Diego CA 92117

512-905-1900

Carrielawrence33@gmail.com

Sponsors: Nancy Ridgway & John Neet

May 17, 2023

Dear GDCA Member:

According to Article V of the Constitution and By-Laws of the Great Dane Club of America, Inc., the Nominating Committee, consisting of; Mary Lee Williams, (Chairman), Jessie Gerszewski, Fay Rogstad, Kathy Fontana, and Kathy Toomey has nominated the following candidates for Officer and Board positions to be filled at the next annual election.

The recommended slate for the 2023-2024 GDCA Officers and Board of Directors:

- *President – Jamie Harshfield, Washington (2025)**
- *1st Vice President - Nancy Ridgway, Texas (2024)**
- *2nd Vice President – Jim Remaklus, Georgia (2024)**
- *Corresponding Secretary – Wanda Hepler, North Carolina (2025)**
 - *Treasurer - Kathy Munyan, Arizona (2025)**
 - AKC Delegate - Jean Highlands, Ohio (2025)
 - Affiliate Club Representative-Linda Cain (2025)
 - Director – Lisa Barratt, Connecticut (2024)
 - Director – Nichole Bartlett, Arizona (2024)
 - Director – Karen Desjardins, Connecticut (2024)
 - *Director – Jason Hoke, Wisconsin (2026)**
 - Director - Joy Lobato, Missouri (2025)
 - *Director - Darryl Pitts, Georgia (2026)**
 - Director – Jay Roden, Ohio (2025)
 - Director - Joyce Rowe, Texas (2025)
 - Director – Mary Lee Williams (2025)

***The names in bold font are the positions up for election**

According to Article V, Section 4 of the GDCA by-laws , “The Corresponding Secretary shall, on or before June first (1st), send notice by email or regular mail if no_email is provided to each regular member and member Affiliate Club setting forth the Nominating Committee’s choices for the offices and positions to be filled. Any regular member in good standing, whose name does not appear upon the slate submitted to the Corresponding Secretary by the Nominating Committee, shall be eligible if, and only if, his/her name is proposed in writing and mailed to the Corresponding Secretary and President of the Club, and endorsed by five (5) other members in good standing, with the written consent or signature of the candidate. The candidate and endorsers shall be members in good standing with the Club for a minimum of one (1) year. Such endorsement shall be sent with original signature affixed, by certified mail with return receipt or delivered by hand to the Corresponding Secretary and the President of the Club on or before **July first (1st)** setting forth the office for which he/she is a candidate. If no valid additional nominations are received by the Corresponding Secretary and President **by July first (1st)**, the Nominating Committee’s slate shall be declared elected at the time of the annual meeting and no ballot shall be required.

In the event additional nominations are made the Corresponding Secretary shall, on or before July fifteenth (15th), notify each regular member of the Club of the name(s) of the candidate(s) so named or proposed and enclose a ballot for use in voting by mail together with instructions for its use.”

Sincerely,

Denise Matulich
Corresponding Secretary

2023 GDCA WESTERN DIVISION SPONSORSHIP PROGRAM

It's not much longer until the 2023 GDCA National, and we still have some openings for Sponsorships. Reserved seats included with Sponsorships are in order of sign-ups and will be assigned accordingly. If you have any questions, please feel free to contact me, and let's be sure you are included.

Debi Romerosa
debiromerosa@verizon.net
559-410-1897

Diamond (Donations of \$10,000 and above)

In appreciation of your generosity, you will receive the following:

- Booth space during National Specialty up to 25' when possible. This will include electrical and Wi-Fi connections whenever available at no expense to the sponsor. **
- Two ad pages in the National Specialty Catalog
- Two Futurity catalogs, two National Specialty catalogs and two Top 20 catalogs
- Recognition by the Announcer at least four times a day during show hours
- A listing on banners to be placed throughout common areas at the show site
- Recognition on a catalog page listing the sponsors
- 4 Tickets to the Top 20 Dinner with reserved seating *
- Four reserved seats at the Top 20 Invitational
- 4 Tickets to the Auction Dinner with reserved seating *
- 4 Tickets to the Awards Dinner with reserved seating *
- Reserved ringside seating for four***
- 800 Raffle tickets

Platinum (Donations of \$5,000 – \$9,999)

In appreciation of your generosity, you will receive the following:

- Booth space during National Specialty up to 20' when possible. This will include electrical and Wi-Fi connections whenever available at no expense to the sponsor. **
- Two ad pages in the National Specialty Catalog
- Two Futurity catalogs, two National Specialty catalogs and two Top 20 catalogs
- Recognition by the Announcer at least four times a day during show hours
- A listing on banners to be placed throughout common areas at the show site

- Recognition on a catalog page listing the sponsors
- 4 Tickets to the Top 20 Dinner with reserved seating *
- Four reserved seats at the Top 20 Invitational*
- 4 Tickets to the Auction Dinner with reserved seating*
- 4 Tickets to the Awards Dinner with reserved seating*
- Reserved ringside seating for four***
- 800 Raffle tickets

Gold (Donations of \$2,500.00 – \$4,999.99)

In appreciation of your generosity, you will receive the following:

- Booth space during National Specialty up to 15' when possible. This will include electrical and Wi-Fi connections whenever available at no expense to the sponsor. **
- One ad page in the National Specialty Catalog One Futurity catalog, one National Specialty catalog and one Top 20 catalog
- Recognition by the Announcer at least four times a day during show hours
- A listing on banners to be placed throughout common areas at the show site
- Recognition on a catalog page listing the sponsors
- 2 Tickets to the Top 20 Dinner with reserved seating *
- Two reserved seats at the Top 20 Invitational
- 2 Tickets to the Auction Dinner with reserved seating *
- 2 Tickets to the Awards Dinner with reserved seating *
- Reserved ringside seating for two***
- 400 Raffle tickets

Silver (Donations of \$1,500.00 – \$2,499.99)

In appreciation of your generosity, you will receive the following:

- Booth space during National Specialty up to 10' when possible. This will include electrical and Wi-Fi connections whenever available at no expense to the sponsor. **
- One ad page in the National Specialty Catalog
- National Specialty catalog
- Recognition by the Announcer at least four times a day during show hours
- A listing on banners to be placed throughout common areas at the show site
- Recognition on a catalog page listing the sponsors
- 2 Tickets to the Awards Dinner with Reserved Seating*
- Reserved ringside seating for two***
- 300 Raffle tickets

Bronze (Donations of \$1,000.00 – \$1,499.99)

In appreciation of your generosity, you will receive the following:

- Recognition by the Announcer at least four times a day during show hours
- A listing on banners to be placed throughout common areas at the show site
- Recognition on a catalog page listing the sponsors National Specialty catalog
- 2 Tickets to the Awards Dinner with Reserved Seating*
- Reserved ringside seating for two***
- 200 Raffle tickets

* Seating will be reserved for sponsors

** In the event that an individual qualifies for a Silver or higher level by virtue of his donation, the booth space will not be included.

***In the event that the first row is filled, we will assign seats to the second row based on the order that the sponsorships are purchased. All seats are pending COVID 19 Guidelines.

For questions concerning Sponsorship, please contact:

Debi Romerosa
GDCA National Specialty Sponsor Chairperson
(559) 410-1897
debiromerosa@verizon.net

Make your Sponsor Donation online via the GDCA National Store at gdca.org
OR

Make a Personal Check, Cashiers Check or Postal Money Order payable to: "GDCA Western Division"

Mail completed Sponsor Donation Information *and check to:*

Kathy Munyan, Treasurer
GDCA Western Division
13201 S 34th Way
Phoenix, AZ 85044-3623

Final deadline for donor's name to appear in the catalog: September 15, 2023



MAY 2023 NEWS UPDATES

BREAKING NEWS ON THE COED OSTEOSARCOMA RESEARCH

The Charitable Trust will subsidize the cost of the blood draws for those who have been accepted into the study on early detection and risk assessment of canine osteosarcoma.

Please submit your paid invoice to Darryl Pitts at GDCA.COED@gmail.com. Reimbursements will be up to \$75 for the cost of the blood draw.

Our sincere gratitude to everyone who participates and to Dr. Pitts for being the gatekeeper of this program.

You may still apply to participate if you meet the following criteria. Your Great Dane must:

- ◆ Be at least 4.5 years old
- ◆ Be currently healthy: no cancer, no undiagnosed "lumps or bumps" (including inside the oral cavity), no serious chronic health conditions – and still have their spleen
- ◆ Never have been diagnosed with any cancer
- ◆ Live in one of the contiguous 48 states of the United States of America (samples from Alaska and Hawaii and international samples, including from Canada and Mexico, cannot be accepted due to shipping constraints)

Owners who are interested in having their dogs participate in this study should visit <https://z.umn.edu/COED> to fill out an eligibility study. You will be notified if your dog is chosen.

NOTE: The COED Study is not intended as a diagnostic for disease. It is an experiment to determine whether the blood/plasma/serum test can be used as a tool for early detection and risk assessment of osteosarcoma. Neither owners nor veterinarians will receive a diagnostic report.



Contents lists available at ScienceDirect

Theriogenology

journal homepage: www.theriojournal.com

Sperm parameters in the Great Dane: Influence of age on semen quality

Azarene Foutouhi^a, Andrea Hesser^b, Alejandro de la Fuente^a, Evelyn Bulkeley^a, Pouya Dini^c, Stuart Meyers^{a,*}

^a Departments of Anatomy, Physiology, and Cell Biology, Davis, 95616, USA

^b Genesis Canine Reproduction, Owasso, OK, 74055, USA

^c Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, 95616, USA



ARTICLE INFO

Article history:

Received 16 September 2022

Received in revised form

1 December 2022

Accepted 1 December 2022

Available online 5 December 2022

Keywords:

Sperm
Dog
Age
ROS
Motility
Senescence

ABSTRACT

Not all sires have sperm suitable for chilled or frozen storage, and success in artificial insemination (AI) varies highly among individual dogs and breeds. Fertilizing potential is further complicated as sperm quality declines with the aging process. Due to the rapidity of aging and senescence in large breed dogs, associated health and fertility changes may be observed over a shorter period, though this period remains undefined for any breed. Working with a population of purebred Great Danes (GD), our aims were (1) to characterize the distribution of a series of sperm parameters, (2) to distinguish sources of variation in sperm quality within this rapidly aging breed, and (3) to identify changes in sperm quality that may accompany aging. Ejaculates collected from young, middle-aged, and senior Great Dane dogs ($n = 50$) were evaluated for semen volume, total sperm number and viability, and reactive oxygen species (ROS), in addition to sperm morphology and kinematic parameters. Total testicular volume was also determined using ultrasonography. Testicular volume was not a predictor of sperm production in the GD, however, significant differences between coat colors were identified. Age was negatively associated with total motility, progressive motility, and amplitude of lateral head displacement (ALH) ($p < .05$). We identified significant relationships between GD male age and TM, PM, and immotility with -9.9% , -9.0% , and $+8.3\%$ change per year of age, respectively, which support the anecdotal reports of decline of the fertility with the advance of age in this breed. Sperm of younger GD dogs aged $12 \leq x < 24$ months had significantly higher TM, PM, ALH, and nonlinear motility ($p < .05$) than older dogs ($x \geq 48$ months). High ROS levels were positively associated with TM and PM, average pathway distance (DAP) and straight line distance (DSL), average pathway velocity (VAP), straight line velocity (VSL), and the presence of hairpin tails ($p < .05$). While age and ROS have significant influences on sperm parameters in the GD, the influence of selection for breed specific phenotypes could help explain the functional significance of the diversity among GD males.

© 2022 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

The use of artificial insemination (AI) with cryopreserved sperm for dog breeding has been expanding in veterinary clinical practice and is useful for overcoming geographic barriers in semen transportation, the genetic improvement of elite breeding stock, and protection against the transmission of venereal diseases. However not all sires used for AI have sperm suitable for frozen storage, and

despite significant advances, cryopreservation success varies highly among individual dogs.

Fertilizing success is further complicated by the aging process. Like humans, dogs display natural lifespan variation although the age a dog is considered “senior” can differ widely with breed. Mixed breed dogs live an average of 1.2 years longer than their size-matched purebred counterparts, and body size is negatively correlated with lifespan: small breeds such as the toy poodle average 16 years, while large breeds such as the Irish Wolfhound may average 6–7 years [1–3]. Due to the rapidity of aging and senescence in large breed dogs, associated health and fertility changes may be observed over a shorter period, though this period

* Corresponding author.

E-mail address: smeyers@ucdavis.edu (S. Meyers).

remains undefined for any breed.

In dogs, advanced age is known to result in decreased sperm motility, smaller litter sizes, and higher perinatal puppy loss [4,5]. There is evidence of increased occurrence of testicular tumors and decreased spermatogenesis in older dogs, and a lower percentage of normal sperm in the ejaculate when compared to younger dogs [6,7]. Sperm from senior dogs has been found to be more susceptible to cryoinjury highlighting the current need to cryopreserve sperm of elite breeding stock during the height of reproductive maturity, often years before being proven in their discipline [8,9].

The progressive decline in fertility with age is frequently associated at the cellular level with the production of advanced glycation end products (AGE) and oxidative stress, a state related to increased cellular damage triggered by reactive oxygen species (ROS) [10–12]. ROS are normally produced at a basal level within mitochondria during ATP production as a result of low levels of electron leakage from mitochondrial electron transport chain complexes I and III, resulting in oxidation of molecular oxygen. This results in superoxide anion (O_2^-) as the primary ROS formed. Sperm motility is a heavily ATP-dependent function and oxidative phosphorylation (OXPHOS) has been identified as a major source of ROS in sperm as ATP is produced in the mitochondria to support essential functions of the fertilization process [13]. Intermediate ROS levels mediate important functions of sperm required for fertilization such as the signal transduction processes facilitating capacitation. However, high ROS levels may overwhelm antioxidant capabilities resulting in reduced mitochondrial function, membrane and DNA damage, and apoptosis [14,15].

In addition to age effects, genetic selection in dogs has resulted in well-defined breeds but may have also negatively influenced semen quality and fertility outcomes. This indicates a possible need for assisted reproductive technologies (ART) such as AI and the development of breed-specific reproductive strategies. Single nucleotide polymorphism (SNP) array data indicates large breed dogs tend to have a higher coefficient of inbreeding than smaller breeds, which can result in an increase in reduced ejaculate quality and fertility, and greater puppy loss in litters with older parents when compared to outbred dogs [1,4,16,17].

Few large-scale breed-specific population studies of canine semen quality have been reported for any breed, and the understanding of sperm quality parameters that underlie optimal sperm function and fertility remain unclear, particularly in large rapidly-aging breeds such as the Great Dane (GD). Our primary objectives were to characterize the distribution of sperm parameters in a large population of purebred North American Great Danes, to determine the relationship between testicular volume and sperm production capacity as has been shown in several species including livestock [18–23]. Moreover, we sought to distinguish sources of variability within the breed and to characterize semen parameters and sperm morphologic traits associated with increased age and ROS production. This study was performed using a single representative ejaculate from a population of actively showing dogs of various ages and coat colors approved by the American Kennel Club.

2. Materials and methods

2.1. Animals

Great Dane males ($n = 50$) were evaluated at the 2019 Great Dane National Specialty (Great Dane Club of America) in Virginia Beach, VA from September 11 to September 13, 2019 with the consent of their owners. As this was a clinical field study with privately-owned dogs, IACUC approval was not required. The males represented were actively showing Great Dane dogs. Ages of the dogs sampled ranged from 11 months to 72 months. All coat colors

approved for the Great Dane breed by the American Kennel Club were represented in the study. This sample population is skewed younger by the nature of the show dog population and does not have balanced representation of senior intact dogs for this study. Further, as dogs presenting to us for semen evaluation were randomly presented by owners wishing to participate in this semen survey study, we obtained a complete health history and determined that all dogs were current on routine vaccinations and fed a wide variety of diets outside the scope of analysis of this study.

2.2. Semen collection

All semen collection and sample processing was completed on-site at the 2019 Great Dane National Specialty. Semen was collected on a rubber backed mat in a quiet and isolated hotel meeting room in which a mobile laboratory was set up by us. Ejaculates were collected from each dog by a veterinarian using manual collection into sterile plastic collection sleeves attached to 15-mL conical tubes after the dog achieved erection. Total ejaculate volume was recorded and an initial evaluation confirming the presence of sperm was performed using a phase contrast microscope at $\times 200$ magnification (Zeiss Axiolab®). No dogs had been collected within the previous seven days of their participation in the study. Due to the dogs in this study actively showing at the national specialty, semen was collected after the completion of their events and we were unable to perform a clean out prior to collection. No dogs in this study were undergoing active semen collection for breeding or shipping.

2.3. Chemicals and reagents

The fluorochromes CellRox™ Deep Red Fixable and Live-Dead™ Green Fixable 488 were obtained from ThermoFisher Scientific (Greenville, NC, USA). All other chemicals were obtained from Sigma Chemical Co. (St. Louis, MO, USA) unless otherwise stated.

Culture medium used for this study was modified Tyrode's medium (TGLP hereafter) prepared without albumin, containing 1% polyvinylpyrrolidone, 75 millimolar (mM) NaCl, 2.8 mM KCl, 0.2645 mM KH_2PO_4 , 40 mmol/L HEPES sodium salt, 2 mmol/L $NaHCO_3$, 2 mM $CaCl_2$ (0.1 M solution, Ricca), and 0.4 mM $MgCl_2$ (1 M solution) [24]. Complete medium contained the following metabolites: 5 mM D-glucose, 1 mM sodium pyruvate, and 0.186% v:v DL-Lactic acid syrup (21.6 mM). pH of complete medium was adjusted to 7.4 ± 0.02 and osmolality of 300 ± 10 mOsm/kg. The complete TGLP medium was prepared fresh daily for experimentation and pre-warmed to 37°C prior to semen collection.

2.4. Determination of sperm concentration, morphology, and motility parameters

Sperm number, concentration, and viability estimates were obtained by using the NucleoCounter® SP-100™ automated cell counter (Chemometech, Allerød, Denmark) immediately following collection, using plasma membrane status determined by propidium iodide staining as an approximation of viability [25,26]. One hundred microliters of each dog's raw ejaculate was fixed in 500 μ L of 10% buffered formalin for later morphological assessment at our UC Davis laboratory. Sperm morphology was assessed by a single observer and recorded in the SpermVision®SAR computer assisted sperm analysis (CASA) system (Minitube USA, Inc. Verona, WI 53593). One hundred sperm were evaluated for each fixed sample at $\times 1000$ magnification by differential interference contrast (DIC) microscopy with oil immersion (Olympus BX-60 with $\times 100$ objective). All CASA motility assessments were performed by the same observer using the SpermVision®SAR CASA system. Leja

chambered slides (Leja Products BV; Luzernestraat, The Netherlands) were pre-warmed on a 37°C warming plate for 5 min then each chamber was loaded with 3 µL of semen extended in TGLP (200 µL; 30–50 million/mL). Average motility parameters were evaluated using SpermVision®SAR measuring seven fields with X 200 reverse phase-contrast microscopy. Semen was evaluated for total and progressive motility (TM, PM, %), average pathway velocity (VAP, µm s⁻¹), straight line velocity (VSL, µm s⁻¹), curved line velocity (VCL, µm s⁻¹), straightness (STR, ratio), amplitude lateral head displacement (ALH, µm), average path distance (DAP, µm), straight line distance (DSL, µm), curved line distance (DCL, µm), beat cross frequency (BCF, Hz), wobble (WOB, ratio), linearity (LIN, ratio), % local motility, and % hyperactive. SpermVision®SAR CASA settings are listed in Table S1.

2.5. Measurement of testicular volume

Testicular volume was measured using ultrasonographic measurement of height, width, and length of each testicle using an Exapad Mini ultrasound unit with 7.5 to 4.5 MHz microconvex transducer (IMV Imaging, Rochester, MN 55901). Briefly, manual isolation of each testicle within the scrotum was performed such that length (l), width (w), and height (h) of each testicle was measured using the ultrasound digital caliper. Each dimension was scanned and evaluated for any ultrasonographic irregularities in tissue density. The l x w x h gross volume product for each testicle was calculated in cm and then combined into a total testicular gross volume (cm³) which was then fitted to the volume of an ellipsoid by the following equation: $4/3(\pi)abc$ where $a = h/2$; $b = w/2$; $c = l/2$ [19] in Microsoft Excel.

2.6. Fluorescence staining and laser flow cytometry

Stained, fixed sperm were evaluated using flow cytometry for viability and cellular ROS production using a BD Accuri C6 Flow cytometer (BD Biosciences, Franklin Lakes, NJ, USA) equipped with blue (488 nm) and red (640 nm) lasers. Cellular ROS production in live sperm was measured using a combination of fixable and stable stains. CellRox™ Deep Red reagent is a cell-permeable weakly fluorescent probe that exhibits a strong fluorescence signal after oxidation. Live-Dead™ Green 488 is impermeable to cells with intact membranes and allows for discrimination of live and dead cells by reacting with free amines of the cell surface and interior to yield intense fluorescence. These stains were necessary in order to determine the viability and ROS status of sperm prior to fixation and such that the samples could be express-shipped to our laboratory at UC Davis for flow cytometric evaluation. In preliminary work, we determined optimal conditions for fixation and staining and determined that fluorescence of the stained and fixed samples were stable for at least 48 h. Briefly, ejaculates were washed with modified Tyrode's medium (TGLP), then adjusted to a concentration of 25×10^6 sperm per mL. Aliquots (500 µL) were stained with 0.5 µL of Live-Dead Green according to manufacturer's directions diluted with dimethylsulfoxide (DMSO). In viable cells the stain's reactivity is limited to the cell surface, resulting in a 50-fold difference in signal intensity between live and dead cells. Samples were immediately then counterstained with 1.25 µL of CellRox™ Deep Red diluted to 1 mM with DMSO. CellRox™ Deep Red localizes to the cytoplasm and specifically detects ROS in live cells. The probe is weakly- or non-fluorescent in its reduced state but exhibits strong signal upon oxidation by oxidizing agents in the cytoplasm. Samples were incubated at 37°C in the dark for 30 min and washed to remove excess probe by centrifugation at 350g for 5 min to obtain a soft pellet. After discarding the supernatant, the pellet was resuspended in 1 mL of TGLP. Samples were then washed once by

centrifugation at 350g for 5 min, then supernatant was discarded and pellet resuspended in 250 µL of TGLP. Stained samples were then fixed by adding 250 µL of 4% paraformaldehyde in Dulbecco's phosphate buffered saline without calcium or magnesium (DPBS –/–) for 15 min in the dark at room temperature. Fixed stained samples were washed once by centrifugation at 350g for 5 min, then supernatant was carefully discarded, and the pellet was resuspended in 500 µL of DPBS –/– and shipped overnight in a light-tight package at room temperature to our UC Davis laboratory for measurement.

Tert-butyl hydroperoxide (TBHP) was used as a positive control for ROS production, and frozen-killed sperm that were flash frozen in liquid nitrogen was used as a negative control for viability. Forward scatter and side scatter measurements were used to gate for sperm by excluding larger contaminating cells or any clusters of adherent sperm. 20,000 events were collected per sample. Red fluorescence was measured with a FL4 640/65 filter, and green fluorescence was detected with a FL1 495/520 filter.

2.7. Data analysis

All statistical analysis was performed using JMP® Pro (Version 16.0. SAS Institute Inc., Cary, NC, 1989–2021). Population distributions of semen parameters represent untransformed data and are presented as mean ± SEM. Normality of data was determined using the Shapiro-Wilk test and when possible non-normal data was transformed to achieve normal distribution using either log, square-root, or arcsin square-root when appropriate. Flow cytometric data was gated and analyzed to identify live high-ROS sperm subpopulations using the BD FACSuite software (BD Biosciences) prior to statistical analysis.

Effects of age, viability, ROS, motility, and other parameters were analyzed using linear (age) and linear-log (ROS) regression with level of significance set at $p < .05$. Interpretation of coefficients of linear and linear-log model regressions were performed to estimate the effect of increasing age and ROS on sperm parameters [27].

Means comparison testing was performed using ANOVA, or Kruskal-Wallis (KW) for non-parametric data, to determine significant differences between GD grouped by coat color, and by age in months (dogs 12 months or older and up to 24 months, dogs 24 months or older and up to 48 months, and dogs 48 months of age or older) with significance set at $p < .05$. Post hoc analysis using the Tukey-Kramer honestly significant difference test (HSD) for parametric data, and Steel-Dwass all pairs test (Dwass) for nonparametric data was used to identify differences between coat color and age groups, with significance set at $p < .05$. Due to multicollinearity of highly correlated semen sperm parameters, Factor Analysis was used to reduce dimensionality in the dataset and identify relationships between variables. Absolute loading values less than 0.6 were suppressed.

3. Results

3.1. General distribution of sperm parameters

The median age of the Great Danes collected in this study was 30.4 months with a minimum of 12 and a maximum of 72 months (Table S2). Two dogs younger than 12 months of age were collected but were azoospermic and excluded from the study. Sperm viability estimates ranged from 0 to 99.3% with a mean of $80 \pm 3.7\%$. The total sperm number was positively skewed with a mean of 2854.1 ± 404.1 million sperm.

Total testicular volume significantly differed by coat color ($p < .001$), with the testicular volume of fawn dogs ($n = 13$) being smaller than that of mantle ($n = 7$), blue ($n = 7$), and harlequin

($n = 5$) ($p < .05$) dogs. Testicular volume of mantle dogs was greater than that of fawn ($p < .001$), brindle ($n = 6$) and black dogs ($n = 7$) ($p < .05$) (Fig. 1, Table S5). However, no relationships between testicular volume, total sperm number, or sperm motility were observed.

The distribution of sperm morphology parameters in the study population are shown in Table 1, and a subset are highlighted in Fig. S1. Percentage of morphologically normal sperm ranged between 2% and 81% with a mean of $43.4 \pm 2.8\%$ and 7.3% of Great Danes in this study had $\geq 70\%$ morphologically normal sperm.

3.2. Effect of age on motility

The distribution of motility parameters in the study population are shown in Table 2 and highlighted in Fig. S2. When GD were grouped by age in months as follows: dogs 12 months or older and up to 24 months ($n = 16$), dogs 24 months or older and up to 48 months ($n = 27$), and dogs 48 months of age or older ($n = 5$). Means comparisons testing indicated significant differences between age groups in TM ($p < .05$), PM ($p < .05$), ALH ($p < .05$), and %nonlinear sperm ($p < .05$). Post-hoc analysis yielded significant differences in sperm parameters between dogs 12–24 months of age, and dogs older than 48 months (Fig. 2, Table S5).

GD older than 48 months had significantly lower TM ($p < .05$) and PM ($p < .05$) than dogs aged between 12 and 24 months. Both TM and PM displayed bimodal characters, with two populations of sperm with $<40\%$ and $>50\%$ TM, and $<30\%$ and $>40\%$ PM. ALH and the percent of nonlinear sperm was greater in GD between 12 and 24 months than dogs older than 48 months at significance level $p < .05$. Differences between these groups approached significance for additional kinematic parameters such as local motility ($p < .05$), %linear sperm ($p < .05$), and %immotile sperm ($p < .05$).

Significant predictive relationships were identified (Table S3) in the prediction of several dependent variables based on male age and include TM ($p < .01$) and PM, local motility, immotility, ALH, and % linear sperm at significance level $p < .05$. Regression modeling predicted that TM and PM decreased 9.9% and 9.0%,

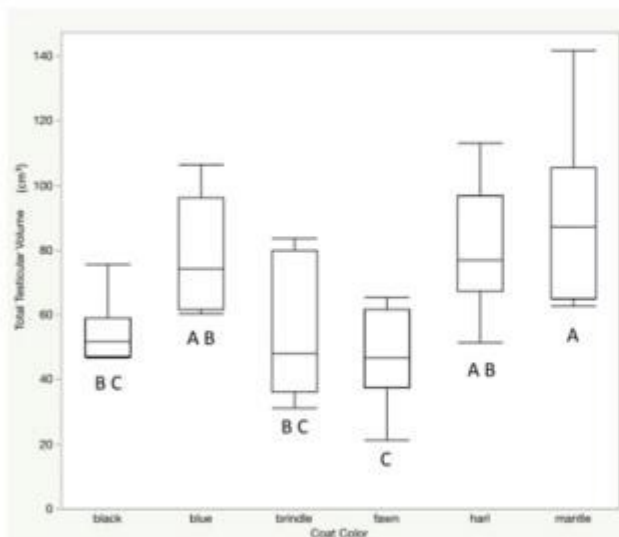


Fig. 1. Means comparison of total testicular volume by coat color, where shared letters indicate lack of significance between groups. Groups which do not share letters have significantly different means ($p < .05$). Box plots indicate group means \pm SEM. ($n = 48$ total and distribution as mantle ($n = 7$), harlequin ($n = 8$), fawn ($n = 13$), black ($n = 7$), brindle ($n = 6$), blue ($n = 7$).

Table 1

Distribution of sperm morphology parameters in the Great Dane, expressed as mean \pm SEM. ($n = 48$).

Parameter (%)	Mean \pm SEM
No Defect	43.43 \pm 2.83
Proximal Droplets	6.15 \pm 1.41
Distal Droplets	4.55 \pm 0.81
Bent Midpieces	5.48 \pm 0.87
Bent Necks	2.9 \pm 0.57
Hairpin Tails	22.95 \pm 2.66
Coiled Tails	7.43 \pm 1.55
Multiple Tails	0.48 \pm 0.16
Detached Heads	6.45 \pm 2.02

respectively, with each year of age in the Great Dane. In contrast, the percent of immotile sperm is predicted to increase 8.3% per year of age. ALH is predicted to decrease 0.3 μm with each year, while linearity increases by 6.6%. A small effect was identified between age and local motility, with a predicted 1% yearly increase in Great Danes in this study.

3.3. Relationship between ROS and sperm motility and morphology

Due to insufficient sperm numbers required for staining procedures (<50 million) 12 dogs were excluded from the flow cytometry portion of the study ($n = 38$) and are not reflected in ROS data. Significant relationships were identified in the prediction of several dependent variables based on the percentage of live sperm with high cytoplasmic ROS and include motility parameters such as TM, VAP, VSL, DAP, and DSL at significance level $p < .05$ (Table S4). A 10% increase in ROS in live sperm is predicted to result in a 12.7% increase in TM, 13.7 $\mu\text{m s}^{-1}$ increase in VAP, 12.4 $\mu\text{m s}^{-1}$ increase in VSL, 5.8 μm increase in DAP, and a 5.4 μm increase in DSL.

Significant positive relationships were also identified between high cytoplasmic ROS and morphologic abnormalities of the tail, where a 10% increase in ROS is predicted to result in a 9.8% increase in hairpin tails ($p < .05$) and a 4.8% increase in coiled tails ($p < .05$). High cytoplasmic ROS has a significant negative relationship with immotility ($p < .05$), where a 10% increase in ROS is expected to decrease the percentage of immotile sperm by 12.7%.

3.4. Principal component analysis

Factor Analysis (FA) was performed to explore relationships and sources of variation within the data and identified several population clusters within the Great Danes in this study. Seven factors were extracted, accounting for 84.6% of the variation within the

Table 2

Distribution of sperm motility parameters in the Great Dane, expressed as mean \pm SEM. ($n = 48$).

Motility Parameter	Mean \pm SEM
Total Motility (%)	57.83 \pm 4.33
Progressive Motility (%)	53.59 \pm 4.12
Non-linear (%)	13.39 \pm 1.33
Velocity Average Pathway (VAP, $\mu\text{m s}^{-1}$)	97.84 \pm 4.18
Velocity Straight Line (VSL, $\mu\text{m s}^{-1}$)	86.69 \pm 4.0
Amplitude Lateral Head Displacement (ALH, μm)	5.01 \pm 0.15
Distance Average Path (DAP, μm)	43.02 \pm 1.85
Distance Straight Line (DSL, μm)	38.28 \pm 1.76
Distance Curved Line (DCL, μm)	59.56 \pm 2.36
Velocity Curved Line (VCL, $\mu\text{m s}^{-1}$)	123.73 \pm 5.94
Local Motile (%)	4.24 \pm 0.4
Beat Cross Frequency (BCF, Hz)	25.83 \pm 0.67
Wobble (WOB, ratio)	0.72 \pm 0.009
Hyperactive (%)	2.14 \pm 0.27
Linearity (%)	41.8 \pm 3.25

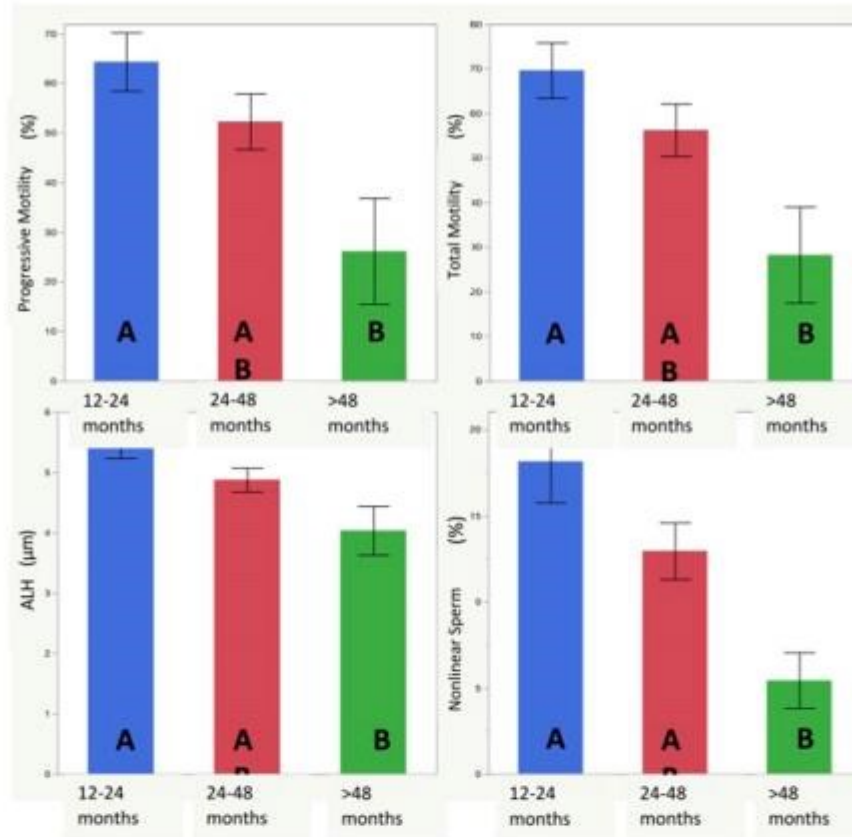


Fig. 2. Means comparisons of sperm motility parameters by age group identified significant differences between young and older Great Dane dogs. Dogs were grouped by age as follows: dogs 12 months or older and up to 24 months (n = 16), dogs 24 months or older and up to 48 months (n = 27), and dogs 48 months of age or older (n = 5). Groups which do not share letters have significantly different means (p < .05). No difference was found between group means of young and older dogs. Box plots indicate group means ± SEM.

breed population we studied (Table 3).

Factor 1 captured 42.2% of variation between Great Danes and was comprised of measures of sperm motility (TM, PM), distance (DSL, DCL, DAP), velocity (VAP, VSL, VCL), viability, and normal morphology. Factor 2 captured an additional 11.2% of variation and was comprised of kinematic measures associated with final sperm maturation events (WOB, LIN, %hyperactive). Factor 3 explains 9.8% of variability and includes age, total sperm number, and an estimate of flagellar vigor (ALH). Factors 4 and 5 included morphologic abnormalities of sperm midpiece and tail, and abnormalities of sperm neck capturing 6.2% and 5.7% of variation, respectively. Factors 6 and 7 explained 4.9% and 4.6% of the variation, respectively, and included ROS and hairpin tails, and total testicular volume and proximal droplets.

The biplot of Factors 1 and 2 accounts for approximately 53.4% of total variation between dogs and indicates parameter clusters and outliers within the population (Fig. S3). Total and progressive motility, kinematic measures of velocity and distance, normal morphology, total sperm number, and viability were clustered with a strong positive association with F1. This kinematic cluster shows a strong negative association with a cluster of morphologic abnormalities including proximal droplets, bent midpieces, coiled tails, and immotility. High cytoplasmic ROS grouped closely with viability and motility parameters but has a negative relationship with morphologically abnormal sperm, excepting distal droplets and hairpin tails.

Factor 1 explains 97.2% of variation in sperm immotility among Great Danes. Similarly, variation within kinematic parameters BCF

Table 3

Description of each factor identified by Factor Analysis including total variation described by each factor, parameter composition, communality values describing proportion of variation described by the factor, and cumulative percent of variance described by the analysis. Absolute loading values less than 0.6 were suppressed.

Factor	% Variation	Description	Cum. Percent
1	41.7	DSL (.99), DCL (.98), DAP (.98), BCF (.94), VSL (.99), VCL (.97), VAP (.98), %LIN (.97), PM (.97), TM (.97), Viability (.69), normal morphology (.80)	41.7
2	11.4	WOB (.96), LIN (.85), % Hyperactive (.85)	53.2
3	9.8	Age (.56), ALH (.88), Total Sperm Number (.62)	63.0
4	6.2	Distal Droplet (.75), Bent Midpiece (.64)	69.2
5	5.7	Bent Neck (.83)	74.9
6	4.9	ROS (.72), Hairpin Tails (.81)	79.8
7	4.6	Total Testicular Volume (.85), Proximal Droplets (0.79)	84.4

(94%), DAP (98%), VAP (98%), DSL (99%), and VSL (99%) are well explained by F1 and share a positive association with ROS. Hyperactive sperm shared strong inverse associations along F2 with grouped outliers WOB and LIN and together represent 11.4% of variation between Great Danes. Variation in WOB (96%), %hyperactive (85%) and LIN (95%) are explained well by F2.

4. Discussion

A total sperm number greater than 300 million in canine ejaculates is generally considered normal, and approximately 75% of ejaculates from GD in our study met this criteria [28]. Though total scrotal width has been associated with sperm production in dogs [29], our regression analysis indicates testicular volume is not a predictor of sperm production capabilities in the Great Danes of this study as compared to that of other species. No age effect was identified in total sperm number or total testicular volume for dogs over 12 months of age, but significant differences between coat colors were identified. The testicular volume of harlequin, mantle, and blue Great Danes were all significantly larger than that of fawn dogs, yet no such relationship existed in total sperm number.

A canine ejaculate with >70% progressively motile and morphologically normal sperm is generally considered to be of high quality, but due to morphologic abnormalities few dogs ($n = 4$) in our study population met this criteria [30]. The Great Danes in this study had lower mean percentages (43.4%) of morphologically normal sperm than a population of young (75%), middle-aged (76%), and senior (57%) Labrador Retrievers with known high fertility that we previously studied [31]. Although not fully defined for the GD, sperm morphologic defects that were observed in this study have been otherwise associated with improper or incomplete spermatogenesis, selenium deficiency, and pathological ROS production in bulls and mice [32,33]. Major morphologic abnormalities are negatively correlated with fertility when present in large percentages, and sperm of dogs which successfully resulted in pregnancy by AI are shown to have significantly better motility and morphology than sperm of males with a history of failed pregnancies [34,35].

When compared to an age-matched known fertile population of Labrador Retrievers, the GD in this study had lower TM (57.8%) and PM (53.6%) than young, middle-aged, and senior dogs (TM>75%, PM>70%) [5]. These parameters significantly differed between GD aged 12–24 months and dogs older than 48 months and are expected to decrease further with age and cooled semen transport as we have previously observed [5,31]. In fact, we identified significant relationships between GD male age and TM, PM, and immotility with -9.9% , -9.0% , and $+8.3\%$ change per year of age, respectively, which is roughly 5–10-fold higher than reported in humans [36].

Sperm of GD older than 48 months of age had significantly lower ALH and non-linear motility than younger dogs aged 12–24 months. ALH is significantly greater in highly fertile bulls and is thought to contribute to cervical mucus penetration and sperm-oocyte fusion [37,38]. Non-linear motility has been described as sperm motility tracks with various degrees of curvature that do not approach a straight line and may include hyperactivated motility [39]. In dairy bulls bred by AI, larger percentages of highly motile non-linear sperm have greater fertilization capacity, and post-thaw sperm from low fertility bulls has lower non-linearity [40]. In humans, non-linearity is positively correlated with mitochondrial membrane potential, indicating the importance of metabolic flexibility in maintaining fertility [41].

Sperm viability estimates by membrane integrity status were high in the GD, with half of dogs having between 70% and 96% viable sperm, although dogs younger than 12 months had low

viability (<20%). While sperm number and viability were observed to be high in the GD dogs in our study, the age-related decline in sperm motility is expected to lower fertilization success particularly in association with cooled and cryopreserved semen.

The ability to generate large objective data sets of physiological responses and kinematic measurements using CASA and flow cytometry has shown that mammalian ejaculates consist of a heterogeneous group of sperm subpopulations [42,43]. Using Factor Analysis we identified distinct clusters in the Great Danes associated with sperm motility and morphology, age, and ROS. In FA, communality is a useful measure for predicting a variable's value. Communality values were high for all kinematic measures in the Great Dane (>.90), indicating more than 90% of variability in sperm motility parameters is explained by the factors identified by FA. The kinematic cluster distinguished close relationships between several sperm velocity indices such as VCL, VSL, VAP, and ALH which are predictive of better post thaw velocities and associated with freezeability in canine sperm [44]. Along with distance parameters including DSL and DAP, this grouping of cryo-predictive parameters is significantly associated with age and ROS in the GD.

When accompanied with high sperm velocity indices, outliers WOB, LIN, and STR have also been associated with predicted freezeability in the dog, though subpopulation distributions differed completely between males [44]. A dose-response relationship has been identified between environmental exposure to the endocrine disrupting chemical (EDC) Bisphenol A (BPA) and increased WOB, LIN, and STR and decreased ALH in human sperm, suggesting environmental exposure to EDCs could be a significant contributor to reduced fertility in males, in general, including Great Danes [45]. BPA has been detected in human and pet tissues and is commonly encountered in toys and training aids, dishes, and pet foods, and is associated with oxidative stress, reduced sperm number and quality, impaired germ cell proliferation, and morphological changes in reproductive organs [46–52]. In fact, perinatal BPA exposure in male rats has been shown to cause transgenerational reproductive impairments including smaller litter sizes, increased resorptions, impaired spermatogenesis, and morphogenesis of testes, uterus, and mammary glands in unexposed offspring two generations later [53,54]. Exposure to BPA and other EDCs due to environment and chewing and mouthing behavior is of particular concern in dogs, but its effects on fertilization and compromised embryo development have shown improvement with antioxidant supplementation in mice [55].

The morphologic abnormality cluster identified by FA distinguished related parameters such as immotility and major sperm defects including coiled tails, midpiece abnormalities, and proximal cytoplasmic droplets in the GD, which generally arise as defects of spermatogenesis and are not considered compensable [56]. In contrast to kinematic measures, roughly 64%–83% of variation in morphology and 72% of variation in ROS can be explained, necessitating further investigation into factors underlying variation in these parameters between GD dogs.

Though defects such as lipid peroxidation, DNA damage, and apoptosis arise when the balance between ROS generation and antioxidant activity is disturbed, ROS also positively influences sperm motility, capacitation, acrosome reaction, and sperm-oocyte fusion [57–61]. In the GD, high cytoplasmic ROS in live sperm is positively associated with measures of sperm motility rather than morphologic abnormalities of the head and neck, or cytoplasmic droplets. The positive relationship between ROS and motility parameters highlights the potentially damaging effect of the metabolic maintenance of motility in sperm. Recent single-cell imaging flow cytometry studies from our lab have demonstrated that abnormal morphotypes of the sperm head and midpiece were directly associated with elevated ROS levels in equine sperm,

suggesting excessive oxidative stress can contribute to the pathophysiology of morphologic abnormalities [62].

While age and ROS have significant influences on sperm parameters within the Great Dane breed, the influence of environment and selection for breed-specific phenotypes may help explain the functional significance of the diversity among the dogs in this study. As pedigreed dogs are bred with the primary aim of conforming to breed standards, fertility and underlying reproductive traits are not generally under heavy selection. Expansion of this work through Whole Genome Sequencing or single nucleotide polymorphism (SNP) studies can identify potential biomarkers associated with fertility.

Due to conducting the study onsite at the National Great Dane Specialty, one limitation of this study is a lack of clean-out, or stabilization of extra-gonadal sperm reserves, prior to collection. Ideally, dogs should be abstinent 4–5 days prior to collection, but prolonged sexual rest may result in increased secondary abnormalities such as detached heads and distal cytoplasmic droplets [63,64]. Additionally, our study was potentially age-biased in that the oldest dog enrolled was 72 months (6 y), with most dogs falling into the middle-aged category. The large study population may have also been inherently biased by including dogs present at the breed National Specialty since breed classes at a National Specialty tend to include younger conformationally sound dogs with unknown fertility. As most senior Great Danes are no longer showing, it is important to reach out to owners to recruit senior dogs for additional further study.

5. Conclusions

The actively showing GD dogs we studied had high total sperm number with high viability, though sperm motility and the percentage of sperm without defects was lower in comparison to a known fertile population of Labrador retrievers. While its variation within the GD is not well explained, high cytoplasmic ROS has a significant positive relationship with TM and several kinematic measures, emphasizing the need to understand the central energetic pathways underlying sperm motility in dogs. Age related changes to sperm function and response to metabolic challenges could be used to improve timelines and identify therapeutic targets for individualized methods of reproductive management of breeding dogs.

Several significant relationships were identified between age and kinematic parameters, with decreases in TM, PM, ALH, and nonlinearity, with sperm from older GD having significantly poorer performance than young dogs. Our results suggest that the aging process could leave large breeds such as the GD susceptible to poorer reproductive outcomes, and that success by ART may be improved by targeting reproductive management between 24 and 48 months of age.

CRedit authorship contribution statement

Azarene Foutouhi: Methodology, Investigation, Validation, Writing – original draft, Data curation. **Andrea Hesser:** Methodology, Investigation, Resources. **Alejandro de la Fuente:** Methodology, Investigation, Writing – review & editing. **Evelyn Bulkeley:** Methodology, Investigation, Writing – review & editing. **Pouya Dini:** Conceptualization, Writing – review & editing. **Stuart Meyers:** Conceptualization, Project administration, Supervision, Investigation, Methodology, writing; original and revision, Funding acquisition, Resources.

Acknowledgements

Authors have no competing interests to declare. This work was made possible by the abounding support and generous participation of Great Dane owners and breeders. We would like to thank the Great Dane Club of America and the Great Dane Charitable Trust for the generous funding and support. We would also like to thank Kayla Wigney, and Drs. Olga Madyrich, and Tatiana Smith for their assistance.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.theriogenology.2022.12.001>.

References

- [1] Yordy J, Kraus C, Hayward JJ, White ME, Shannon LM, Creevy KE, et al. Body size, inbreeding, and lifespan in domestic dogs. *Conserv Genet* 2020;21: 137–48.
- [2] Bernardi G. Longevity and mortality in the Irish Wolfhound in the United States: 1966–1986. *Harp Hound*; 1988. p. 78–84.
- [3] Fleming JM, Creevy KE, Promislow D. Mortality in north american dogs from 1984 to 2004: an investigation into age-, size-, and breed-related causes of death. *J Vet Intern Med* 2011;25 2:187–98.
- [4] Schrack J, Dolf G, Reichler IM, Schelling C. Factors influencing litter size and puppy losses in the Entlebucher Mountain dog. *Theriogenology* 2017;95: 163–70.
- [5] Fuente-Lara Adl, Hesser A, Christensen B, Gonzales K, Meyers S. Effects from aging on semen quality of fresh and cryopreserved semen in Labrador Retrievers. *Theriogenology* 2019;132:164–71.
- [6] Peters MA, de Rooij DG, Teerds KJ, van de Gaag I, van Sluijs FJ. Spermatogenesis and testicular tumours in ageing dogs. *J Reprod Fertil Suppl* 2001;57: 419–21.
- [7] Rijsselaere T, Maes D, Hoflack G, de Kruif A, Van Soom A. Effect of body weight, age and breeding history on canine sperm quality parameters measured by the Hamilton-Thorne analyser. *Reprod Domest Anim – ZuchtHygiene* 2007;42:143–8.
- [8] Brito MM, Angrimani DSR, Lucio CF, Vannucchi CI. A case trial study of the effect of ageing on fresh and post-thaw sperm in dogs. *Andrologia* 2018;50: e13123–.
- [9] Brito MM, Angrimani DSR, Rui BR, Kawai GKV, Losano JDA, Vannucchi CI. Effect of senescence on morphological, functional and oxidative features of fresh and cryopreserved canine sperm. *Aging Male* 2018;1–8.
- [10] Mallidis C, Agbaje I, Rogers D, Glenn J, McCullough S, Atkinson AB, et al. Distribution of the receptor for advanced glycation end products in the human male reproductive tract: prevalence in men with diabetes mellitus. *Hum Reprod (Oxf)* 2007;22:2169–77.
- [11] Aitken RJ. Impact of oxidative stress on male and female germ cells: implications for fertility. *Reproduction* 2020;159:R189–201.
- [12] Darr CR, Moraes LE, Scanlan TN, Baumber-Skaife J, Loomis PR, Cortopassi GA, et al. Sperm mitochondrial function is affected by stallion age and predicts post-thaw motility. *J Equine Vet Sci* 2017;50:52–61.
- [13] Gibb Z, Lambourne SR, Aitken RJ. The paradoxical relationship between stallion fertility and oxidative Stress1. *Biol Reprod* 2014;91.
- [14] Gibb Z, Griffin RA, Aitken RJ, De Iulius GN. Functions and effects of reactive oxygen species in male fertility. *Anim Reprod Sci* 2020;220:106456.
- [15] Darr CR, Cortopassi GA, Datta S, Varner DD, Meyers SA. Mitochondrial oxygen consumption is a unique indicator of stallion spermatozoal health and varies with cryopreservation media. *Theriogenology* 2016;86:1382–92.
- [16] Wildt DE, Baas EJ, Chakraborty PK, Wolfe TL, Stewart AP. Influence of inbreeding on reproductive performance, ejaculate quality and testicular volume in the dog. *Theriogenology* 1982;17:445–52.
- [17] Charlesworth D, Willis JH. The genetics of inbreeding depression. *Nat Rev Genet* 2009;10:783–96.
- [18] Pricking S, Bolhweim H, Spilker K, Martinsson G, Schweizer A, Thomas S, et al. Testicular volumetry and prediction of daily sperm output in stallions by orchidometry and two- and three-dimensional sonography. *Theriogenology* 2017;104:149–55.
- [19] Love CC, Garcia MC, Riera FR, Kenney RM. Evaluation of measures taken by ultrasonography and caliper to estimate testicular volume and predict daily sperm output in the stallion. *J Reprod Fertil Suppl* 1991;44:99–105.
- [20] Mandal DK, Kumar M, Tyagi S. Association of linear type pelvic traits with testicular characteristics and reproductive capability of breeding dairy bulls. *Reprod Domest Anim* 2022;57:957–66. <https://doi.org/10.1111/rda.14241>.
- [21] Perry V, Chenoweth PJ, Post TB, Munro RK. Fertility indices for beef bulls. *Aust Vet J* 1990;67:13–6.
- [22] Gosch B, Fischer K. Seasonal changes of testis volume and sperm quality in adult fallow deer (*Dama dama*) and their relationship to the antler cycle. *J Reprod Fertil* 1989;85:7–17.

- [23] Brito LF, Silva AE, Barbosa RT, Kastelic JP. Testicular thermoregulation in Bos indicus, crossbred and Bos taurus bulls: relationship with scrotal, testicular vascular cone and testicular morphology, and effects on semen quality and sperm production. *Theriogenology* 2004;61:511–28.
- [24] Parrish JJ. Bovine in vitro fertilization: in vitro oocyte maturation and sperm capacitation with heparin. *Theriogenology* 2014;81:67–73.
- [25] Daub L, Geyer A, Reese S, Braun J, Otdorff C. Sperm membrane integrity in fresh and frozen–thawed canine semen samples: a comparison of vital stains with the NucleoCounter SP-100. *Theriogenology* 2016;86:651–6.
- [26] McCue PM. In: Dascamio John, McCue Patrick, editors. *NucleoCounter* ® evaluation of sperm concentration and viability. Equine reproductive procedures. second ed. John Wiley & Sons, Inc.; 2021. p. 483–7.
- [27] Benoit K. Linear regression models with logarithmic transformations. London School of Economics; 2011. p. 1–8.
- [28] Johnston SD. Performing a complete canine semen evaluation in a small animal hospital. *Vet Clin N Am Small Anim Pract* 1991;21:545–51.
- [29] Olar TT, Amann RP, Pickett BW. Relationships among testicular size, daily production and output of spermatozoa, and extragonadal spermatozoal reserves of the dog. *Biol Reprod* 1983;29:1114–20.
- [30] Johnston SD, Root Kustritz MV, Olson PS. *Canine and feline theriogenology*. Philadelphia, PA: Saunders; 2001.
- [31] Hesser A, Darr C, Gonzales K, Power H, Scanlan T, Thompson J, et al. Semen evaluation and fertility assessment in a purebred dog breeding facility. *Theriogenology* 2017;87:115–23.
- [32] Carreira JT, Mingoti GZ, Rodrigues LH, Silva C, Perri SHV, Koivisto MB. Impact of proximal cytoplasmic droplets on quality traits and in-vitro embryo production efficiency of cryopreserved bull spermatozoa. *Acta Vet Scand* 2012;54:1.
- [33] Fujii J, Imai H. Redox reactions in mammalian spermatogenesis and the potential targets of reactive oxygen species under oxidative stress. *Spermatogenesis* 2014;4:e979108-e.
- [34] Oettlé EE, Soley JT. Infertility in a Maltese poodle as a result of a sperm midpiece defect. *J S Afr Vet Assoc* 1985;56:103–6.
- [35] Tesi M, Sabatini C, Vannozzi I, Di Petta G, Panzani D, Camillo F, et al. Variables affecting semen quality and its relation to fertility in the dog: a retrospective study. *Theriogenology* 2018;118:34–9.
- [36] Slotter E, Schmid TE, Marchetti F, Eskenazi B, Nath J, Wyrobek AJ. Quantitative effects of male age on sperm motion. *Hum Reprod* 2006;21:2868–75.
- [37] Al-Qarawi AA, Abdel-Rahman HA, El-Mougy SA, El-Belely MS. Use of a new computerized system for evaluation of spermatozoal motility and velocity characteristics in relation to fertility levels in dromedary bulls. *Anim Reprod Sci* 2002;74:1–9.
- [38] Raushan KS. Computer assisted sperm analysis: relationship between the movement characteristics of buffalo spermatozoa and sire fertility. *Indian J Anim Res* 2017;51(4):660–4. 2017 v.51.
- [39] Tessler S, Olds-Clarke P. Linear and nonlinear mouse sperm motility patterns. A quantitative classification. *J Androl* 1985;6:35–44.
- [40] Shojaei H, Kroetsch T, Wilde R, Blondin P, Kastelic JP, Thundathil JC. Moribund sperm in frozen-thawed semen, and sperm motion end points post-thaw and post-swim-up, are related to fertility in Holstein AI bulls. *Theriogenology* 2012;77:940–51.
- [41] Paoli D, Gallo M, Rizzo F, Baldi E, Francavilla S, Lenzi A, et al. Mitochondrial membrane potential profile and its correlation with increasing sperm motility. *Fertil Steril* 2011;95:2315–9.
- [42] Peña A, Linde-Forsberg CB. Effects of spermatozoal concentration and post-thaw dilution rate on survival after thawing of dog spermatozoa. *Theriogenology* 2000;54:703–18.
- [43] Quintero-Moreno A, Miró J, Teresa Rigau A, Rodríguez-Gil JE. Identification of sperm subpopulations with specific motility characteristics in stallion ejaculates. *Theriogenology* 2003;59:1973–90.
- [44] Núñez Martínez I, Morán JM, Peña FJ. Two-step cluster procedure after principal component analysis identifies sperm subpopulations in canine ejaculates and its relation to cryoresistance. *J Androl* 2006;27:596–603.
- [45] Ji H, Miao M, Liang H, Shi H, Ruan D, Li Y, et al. Exposure of environmental Bisphenol A in relation to routine sperm parameters and sperm movement characteristics among fertile men. *Sci Rep* 2018;8:17548.
- [46] Rahman MS, Kwon W-S, Karmakar PC, Yoon S-J, Ryu B-Y, Pang M-G. Gestational exposure to bisphenol A affects the function and proteome profile of F1 spermatozoa in adult mice. *Environ Health Perspect* 2017;125:238–45.
- [47] Wooten KJ, Smith PN. Canine toys and training devices as sources of exposure to phthalates and bisphenol A: quantitation of chemicals in leachate and in vitro screening for endocrine activity. *Chemosphere* 2013;93:2245–53.
- [48] Kang J-H, Kondo F. Determination of bisphenol A in canned pet foods. *Res Vet Sci* 2002;73:177–82.
- [49] Lassen TH, Frederiksen H, Jensen TK, Petersen JH, Joensen UN, Main KM, et al. Urinary bisphenol A levels in young men: association with reproductive hormones and semen quality. *Environ Health Perspect* 2014;122:478–84.
- [50] Li D-K, Zhou Z, Miao M, He Y, Wang J, Ferber J, et al. Urine bisphenol-A (BPA) level in relation to semen quality. *Fertil Steril* 2011;95:625.
- [51] Liu X, Wang Z, Liu F. Chronic exposure of BPA impairs male germ cell proliferation and induces lower sperm quality in male mice. *Chemosphere* 2021;262:127880.
- [52] Richter CA, Birnbaum LS, Farabolini F, Newbold RR, Rubin BS, Talsness CE, et al. In vivo effects of bisphenol A in laboratory rodent studies. *Reprod Toxicol* 2007;24:199–224.
- [53] Salián S, Doshi T, Vanage G. Impairment in protein expression profile of testicular steroid receptor coregulators in male rat offspring perinatally exposed to Bisphenol A. *Life Sci* 2009;85:11–8.
- [54] Salián S, Doshi T, Vanage G. Perinatal exposure of rats to Bisphenol A affects the fertility of male offspring. *Life Sci* 2009;85:742–52.
- [55] Rahman MS, Kang K-H, Arifuzzaman S, Pang W-K, Ryu D-Y, Song W-H, et al. Effect of antioxidants on BPA-induced stress on sperm function in a mouse model. *Sci Rep* 2019;9:10584.
- [56] Barth AD, Oko RJ. *Abnormal morphology of bovine spermatozoa*. Ames: Iowa State University Press; 1989.
- [57] Aitken RJ, Jones KT, Robertson SA. Reactive oxygen species and sperm function—in sickness and in health. *J Androl* 2012;33:1096–106.
- [58] de Lamarande E, Gagnon C. Impact of reactive oxygen species on spermatozoa: a balancing act between beneficial and detrimental effects. *Hum Reprod* 1995;10:15–21.
- [59] Agarwal A, Saleh RA, Bedaiwy MA. Role of reactive oxygen species in the pathophysiology of human reproduction. *Fertil Steril* 2003;79:829–43.
- [60] Griveau JF, Le Lannou D. Reactive oxygen species and human spermatozoa: physiology and pathology. *Int J Androl* 1997;20:61–9.
- [61] Vieira NdMG, Losano JdDA, Angrimani DdSR, Kawai GKV, Bicudo LdC, Rui BR, et al. Induced sperm oxidative stress in dogs: susceptibility against different reactive oxygen species and protective role of seminal plasma. *Theriogenology* 2018;108:39–45.
- [62] Bulkeley E, Santistevan AC, Varner D, Meyers S. Imaging flow cytometry to characterize the relationship between abnormal sperm morphologies and reactive oxygen species in stallion sperm. *Reprod Domest Anim* 2022. <https://doi.org/10.1111/rda.14241>.
- [63] Foote RH. The influence of frequency of semen collection, fractionation of the ejaculate, and dilution rate on the survival of stored dog sperm. *Cornell Vet* 1964;54:89–97.
- [64] Bartlett DJ. Studies on dog semen. I. Morphological characteristics. *J Reprod Fertil* 1962;3:173–89.

GDCA CHARITABLE TRUST**“The Patriot” Raffle Report**

The Charitable Trust would like to thank Jerry Lobato for donating his artistry, and the following generous donors for funding the foundry costs for “The Patriot”:

Clarence & Jennifer Schram, Mike Boa, Mary Lou Carmody, and Dick Schaefer.

The total proceeds from the raffle were earmarked for Rescue for 2022, and the following 23 Affiliate Clubs responded with donations, for which we are very grateful:

Arizona	California	Central North Carolina	Greater Houston
Greater St. Louis	Hawaii	Hoosier	Illini
Inland Northwest	Lehigh Valley	Monterey Bay	Metro Washington
Milwaukee	New England	North Central Florida	Northern New Jersey
Pennsylvania	South East Florida	Tucson	Western New York
Western Pennsylvania	Willamette Valley	Wolverine	

We are taking the year off from our normal Raffle in 2023 but it is our sincere hope that our 2024 Raffle will generate a response from each of our 50 Affiliate Clubs.

Linda Tonnancour

Chairperson
GDCA Charitable Trust



**Osteosarcoma is a horrible killer of Great Danes.
We need to find the answer. PLEASE help us.**

Dr. Modiano is conducting research on six breeds to find this cancer before it happens. In addition to Great Danes, he is studying Irish Wolfhounds, Leonbergers, Golden Retrievers, Irish Setters, and Rottweilers.

Each of the six breeds in the study has an equitable target quota. However, Great Danes are well below ours. **If we do not meet our goal, other dogs will enter the study at our expense!!** If you have a Great Dane that meets the criteria, please consider participating. **We desperately need your help.**

If you have a healthy dog over 4-1/2 years old with no chronic illness, no cancer and no undiagnosed lumps and bumps, please consider applying. Please do not apply if your dog doesn't fit the criteria. Apply to: <https://z.umn.edu/COED>.
Questions to: Mitzi Lewellen, lewel001@umn.edu

We will subsidize the blood draw by your vet. **Please submit your paid invoice to Darryl Pitts at GDCA.COED@gmail.com. Reimbursements will be \$75.**

PLEASE HELP US HELP THEM.

GDCA Charitable Trust

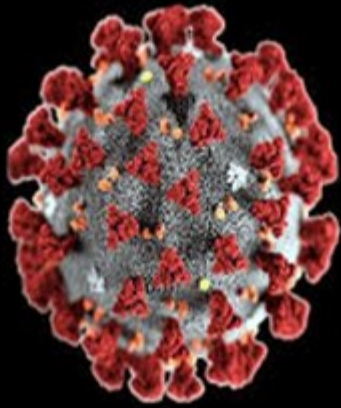


OFA Echocardiograms
Subsidized By The
GDCA Charitable Trust
"UPDATE for 2023" **

OFA Echocardiograms Subsidized by the GDCA Charitable Trust

We are pleased to announce that the Great Dane Club of America and the Great Dane Club of America Charitable Trust are continuing the \$75 reimbursement for echocardiograms for GDCA and Affiliate Club Members for exams performed in 2023. Guidelines for participating are listed below. We would like to thank Darryl Pitts for taking the helm as the gatekeeper for this program.

1. The GDCA Charitable Trust will reimburse (subsidize) OFA advanced cardiac (echocardiogram) studies for GDCA and Affiliate Club Members in the amount of \$75.
2. **Limited to ONE ECHO PER DOG EACH YEAR for either INITIAL or FOLLOW-UP Echocardiogram. ** (Updated April 2022)**
3. Great Dane must be one of the seven acceptable colors as recognized by the breed standard.
4. Echocardiograms performed at GDCA National will be excluded as they are already subsidized and offered at a reduced rate to participants.
5. Send a copy of receipt, OFA application and mailing address for receipt of check to Darryl Pitts at ECHO.GDCA@gmail.com. If you are not a GDCA member, please indicate your affiliate club membership.
6. Processing of checks will be done quarterly. We would appreciate it if you could be timely in cashing your checks. Thank you.



Breaking News

Through The

Great Dane Club of America
Charitable Trust

Covid-19 Help

The Trustees of the Great Dane Club of America Charitable Trust want to remind you that, as in every National Disaster, we are here to offer assistance to the Fancy. Our National Disaster Relief Fund is ready and willing to distribute funds to any Great Dane owner who is in need due to Covid-19.

Our guidelines for this fund provide for financial aid to assist for the medical and sheltering needs of Great Danes in a national disaster, as well as aid to keep the family and dogs together if relocation is necessary. Job loss and illness and/or hospitalization from Covid-19 and Covid-19 like symptoms qualify for consideration.

For information or help, please contact Cathy Schaefer at dick.schaefer@gmail.com or access our application at gdca.org under the Charitable Trust, then click the "Disaster Relief Fund" Tab. You can email your application to Cathy or mail it to her at

10362 E Vail Trap Spring Ct.
Tucson, AZ 85748

IMPORTANT REMINDER: Education Grants Available to Affiliate Clubs

New research, trends, and protocols available to all Dane breeders and owners address the health, happiness, and longevity of our dogs. With many dog shows and busy calendars occupying most of our free time, we may be unfamiliar with what is available to us! The ability to attend classes or seminars is definitely impacted by our chaotic schedules and active lifestyles.

Affiliate clubs are encouraged to apply for grant monies offered jointly by the Great Dane Club of America and the Great Dane Club of America Charitable Trust set aside for the specific purpose of providing educational opportunities to its members and the Dane fancy. Perhaps there is an open date on the club calendar in which an event could be scheduled. New knowledge can only make us better dog owners for our beloved Danes, treasured members of our families.

Attached to this message is an application to request some funds for your affiliate club. We hope you will consider working an educational event into your club's busy schedule.

Great Dane Club of America, Inc.
Education Grant Application

Please attach a brief explanation of your project and include a proposed budget. Projects that include matching funds are particularly encouraged.

Any and all funds awarded by the GDCA and the GDCA Charitable Trust through the GDCA Education Grant are to be utilized exclusively to support education programs or health related projects for GDCA Affiliate Clubs and the Great Dane fancy and may not be applied to any other purpose other than those described on the application. Any variance from this agreement may result in the forfeiture of any and all funds provided and will be returned to the GDCA Charitable Trust upon request.

Date:

Name of Affiliate Club

Address

City, State & Zip

Affiliate Club President Signature

Affiliate Club Secretary Signature

Affiliate Club Delegate Signature

Contact person for questions (please include email or phone number)

Grant amount requested (not to exceed \$1,000.00):\$

Have you received support from the GDCA in the past? Yes No

Return a hard copy to: Joy DeGruccio 193 Admiral Way Costa Mesa, CA 92627
Or email to: joydegruccio1@gmail.com

Approved () Disapproved () Incomplete ()

Signature of the Affiliate Club Representative:

Date:

Date approved by GDCA Board for submission to GDCA Charitable Trust

Action taken by GDCA Charitable Trust



The Great Dane Club of America Charitable Trust

The GDCA Charitable Trust is a 501(c)3 non-profit organization founded in 2002

TRUST PROJECTS INCLUDE:

- * Supporting Research Projects for Breed Specific Health Problems including:
 - * Megaesophagus * Wobblers * Cardiomyopathy
 - * Fertility Issues * Cancer * Epilepsy
 - * Disaster Relief Assistance
 - * Rescue Grants/Rescue Insurance Grants
 - * Subsidizing Cardiac Testing at the National
- * Providing Scholarships for Students, as well as Veterinary Students
 - * Grants for Juniors who show a Great Dane at the Garden
 - * Junior Showmanship Vouchers for Best Junior and Reserve Best Junior at our National Specialty

*Through your support, the GDCA Charitable Trust
will have the necessary resources to respond to calls for help
in the most critical areas of concern ...
the health and welfare of our breed!*

GDCA Charitable Trust * Lisa Foltz, Treasurer
Please Mail Donations to: Cathy Schaefer, 10362 E Vail Trap Spring Ct., Tucson, AZ 85748



The Great Dane Club of America Charitable Trust

The GDCA Charitable Trust is a 501(c)3 non-profit organization founded in 2002

HOW CAN YOU HELP???

- * Through a tax-deductible contribution
- * Through a deferred gift including life insurance or a bequest through your will
- * Through various fund-raising efforts and special events with proceeds benefiting the GDCA Charitable Trust

For more information on how you can participate with us to make our Great Danes lives better or to make a donation, please contact us at: gdcact@yahoo.com or any one of our Trustees personally:

Warren Benoit
warren@benoitandassociates.com

Jim Remaklus
Jimremo2233445@hotmail.com

Joy DeGruccio
joydegruccio1@gmail.com

Cathy Schaefer
dick.schaefer@gmail.com

Rita Suddarth
daneworld94@gmail.com

Lisa Foltz
Avantidogs@comcast.net

Susan Shaw
daviddane@comcast.net

Linda Tonnancour
toncorrl@twc.com

GDCA Charitable Trust * Lisa Foltz, Treasurer
12631 West Martingale Lane * Horner Glen, IL 60491-9278

How Can You Help?



Would You Like To Make a Donation?

All Donations should be mailed to: Cathy Schaefer, 10362 E Vail Trap Spring Ct., Tucson, AZ 85748

Please accept my donation to the GDCA Charitable Trust: (Make Checks Payable to GDCACT)
(Major Credit Cards also accepted)

() \$10 () \$25 () \$50 () \$100 () Other \$ _____

Name _____
Address _____
City _____ State _____ Zip _____
Phone _____ Email _____

Disaster Relief Fund _____ General Fund _____ Health & Research Fund _____
Rescue Fund _____ Scholarship Fund _____

In Honor or Memory Of _____
(Please Circle)

Name and address of person to whom acknowledgement of honor or memorial is to be sent:

The GDCA Charitable Trust is a 501(c)3 Organization. All contributions to the Charitable Trust are tax deductible in accordance with guidelines for 501(c)3 organizations by the Internal Revenue Service.

You can mail in a check or credit card number or can donate online. Please see all of the categories noted above.

Help Us ... To Help Them

Also Please Consider Our Legacy Program

*It's easier than you may think to include the
Great Dane Club of America Charitable Trust in your will.*



Gift Options to Consider:

- Life Insurance
- A Bequest Through Your Will
- A Living Trust
- Retirement Plan
- Gift In Trust
- Retention of Life Interest
- Arts, Antiques and Collectibles

Call or EMAIL Linda Tonnancour - 626-825-1181 / toncorr17244@gmail.com
Or Mail to: Linda at 150 N Eastern Slope Loop, Tucson, AZ 85748
You may also see a trust member.

YES, I want to leave a lasting legacy to protect the future of the
Great Dane Club of America Charitable Trust!

- I have already included a gift to the GDCACT in my will or estate plan.
- I have already included a gift to the GDCACT in my will or estate plan,
but wish to remain anonymous.
- I am actively considering a gift to GDCACT in my will or estate plan.

Name _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Email _____

Help Us . . . To Help Them